

# **AMENDED RECORD OF DECISION NO. 1**



## **SOUTH CAVALCADE STREET SUPERFUND SITE**

**May 16, 1997**

**DECLARATION  
FOR  
THE AMENDED RECORD OF DECISION NO. 1**

012876

**SITE NAME AND LOCATION.**

South Cavalcade Street Site  
2001 Collingsworth Street  
Houston, TX

**STATEMENT OF BASIS AND PURPOSE.** This decision document presents an amendment to the selected remedial action for the South Cavalcade Street Site which was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) (42 U.S. Code, Section 9601, et seq.), and, to the extent practicable, the National Contingency Plan (NCP) (40 CFR Part 300). This decision is based on the Administrative Record for this site. The State of Texas concurs with this amended remedy.

**ASSESSMENT OF THE SITE.** Actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Amended Record of Decision, present an imminent and substantial endangerment to public health, welfare or the environment.

**DESCRIPTION OF THE REMEDY.** This amendment fundamentally changes the Record of Decision (ROD) executed by the Regional Administrator on September 26, 1988. This amended remedy will seal and contain soils contaminated with greater than 700 ppm carcinogenic polyaromatic hydrocarbons (cPAH) beneath a six inch thick reinforced concrete cap.

**STATUTORY DETERMINATION.** The selected remedy is protective of human health and the environment, complies with Federal and State requirements that are legally applicable or relevant and appropriate to the remedial action, and is cost-effective. This remedy utilizes a permanent solution and alternative treatment technologies to the maximum extent practicable. The questionable success of soil washing, the previously selected remedy, and the comparable risk off-site preclude selecting a remedy which treats the contaminants of concern. Since contamination at the site presents only low level threats, and treatment of the contaminated soil at the site was not found to be practicable, this remedy does not satisfy the statutory preference for remedies that employ treatment as a principal element. However, as described in the following Amended Record of Decision a reinforced concrete cap will sever the exposure pathway and thus protect human health and the environment.

Because this remedy will result in hazardous substances remaining onsite above health-based levels, a review will be conducted within five years after commencement of remedial action to ensure that the remedy continues to provide adequate protection of public health, welfare, and the environment.

  
Jerry Clifford

Acting Regional Administrator (6RA)

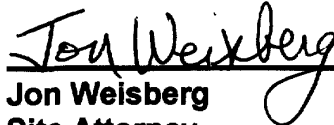
6-27-97  
Date

**SOUTH CAVALCADE STREET  
SUPERFUND SITE  
CONCURRENCE FOR  
AMENDED RECORD OF DECISION NO. 1**

012877



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Project Manager**



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# **SOUTH CAVALCADE STREET SUPERFUND SITE**

## **AMENDED RECORD OF DECISION**

### **NO. 1**

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1. **INTRODUCTION.** In 1988, EPA issued a Record of Decision (ROD) for the South Cavalcade Street Superfund S which selected soil flushing and soil washing as the remedies to remediate wood treating wastes in the soil. However, discussed below, following a soil washing pilot study, it became apparent to EPA that the selected remedy would not achieve the remedial action goals established in the ROD. Consequently, EPA decided to propose a change to the remedy at the site through this ROD amendment to cover the contamination with a concrete cap.

a. **Site Name and Location.** The South Cavalcade Street site was once the site of a former coal tar distillation and creosote wood preserving facility. The contaminants of concern in on-site soils are seven carcinogenic compounds<sup>1</sup> released from the creosote wood preservative prior to 1962, when wood treating operations ceased. The site is located in urban northeast Houston, Texas about one mile southwest of the intersection of Interstate Loop 610 and U.S. Route 59 (Figure 1 & 2). The boundaries of the 66 acre site are Cavalcade Street to the north, Collingsworth Street to the south, and the Houston Belt and Terminal (HB&T) lines to the east and west. The site is generally flat and is drained by two storm water drainage ditches flanking the east and west sides. These ditches discharge into Hunting Bayou, a Houston Ship Channel tributary.

The site is presently used by three commercial freight truck companies: Trucking Properties, Nations Way Transport Service, and Palletized Trucking. These companies erected terminal, office and maintenance buildings on the northern and southern parts of the site. The central part of the site remains vegetated and vacant. Surrounding the site are commercial, industrial and some residential properties. The nearest residential area is directly to the west and across the HB&T railroad tracks; however, there are no residential properties adjacent to a site boundary. EPA anticipates the site will continue to be used as commercial freight truck terminals for the foreseeable future.

b. **Lead and Support Agencies.** EPA is the lead agency overseeing site remediation under the terms of a Consent Decree executed by Beazer East, Inc. ("BEI"), and entered by the U.S. District Court for the Southern District of Texas on March 14, 1991 (Civil Action No. H-90-2406). Under the Consent Decree terms, BEI is responsible for remediating the site in accordance with the remedy selected by EPA, as reflected by the ROD executed by EPA on September 16, 1988. A copy of the ROD is included in the Administrative Record as explained in the paragraph below. The Texas Natural Resource Conservation Commission (TNRCC) provides EPA remedial action support on the site.

c. **Administrative Record.** This ROD amendment will become part of the Administrative Record file in accordance with the National Contingency Plan (NCP), 40 CFR §300.825(a)(2). The Administrative Record contains documents such as the "Remedial Investigation/Feasibility Study" (RI/FS) and ROD, that form the basis for selecting the remedial action. In addition, documents attached to or referenced in this amended Record of Decision are incorporated into the Administrative Record by reference. The Administrative Record is located at:

U. S. Environmental Protection Agency  
Region 6  
1445 Ross Avenue  
Dallas, TX 75202-2733  
(214) 665-6444

Houston Central Library  
500 McKinney  
Houston, TX 77002  
(713) 236-1313

The Administrative Record is available to the public at EPA Region 6 on Mondays through Fridays from 8 a.m. to 4 p.m. or the Houston Central Library on Mondays through Fridays from 9 a.m. to 9 p.m. except legal holidays.

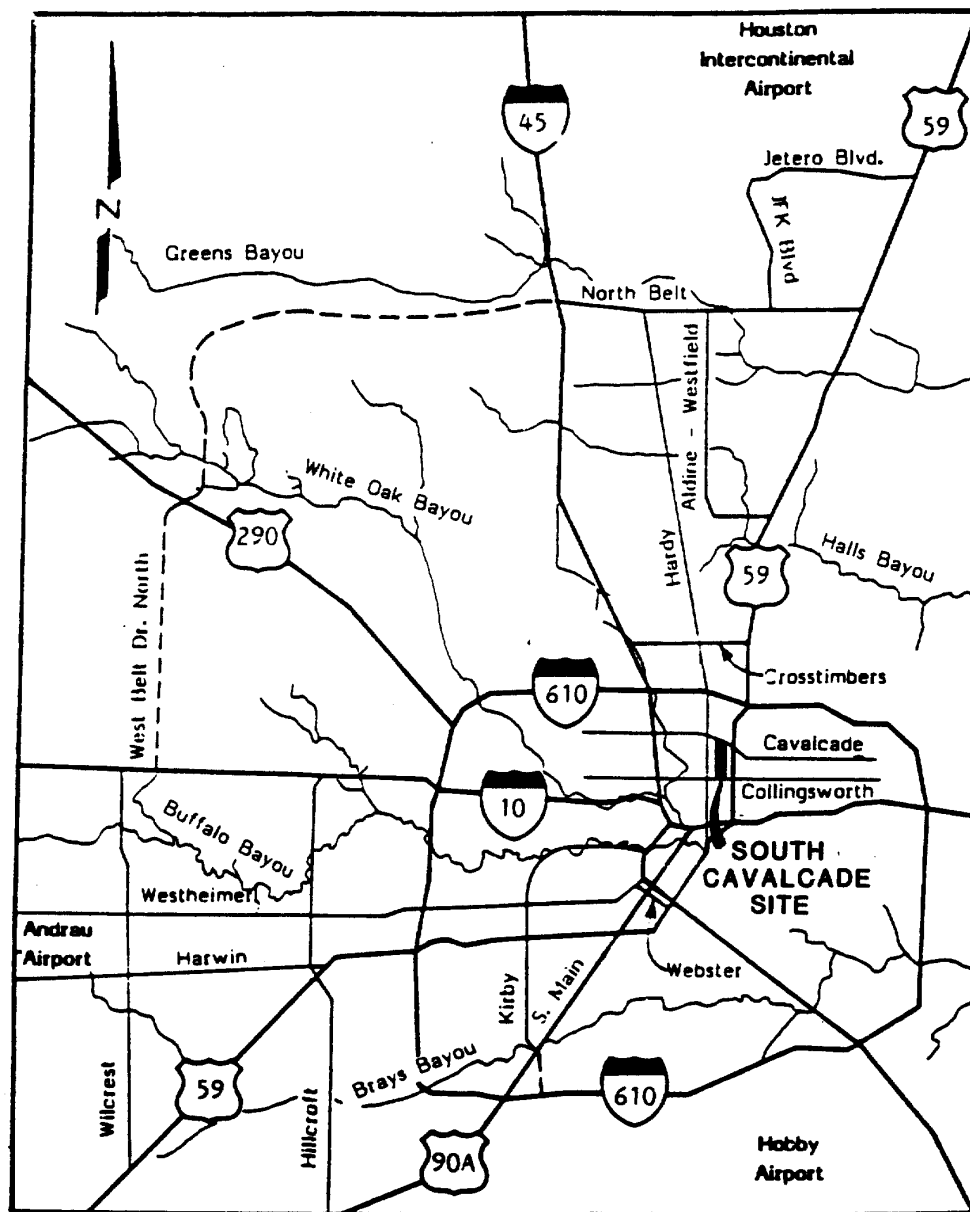
d. **Explanation of Difference.** In lieu of using the soil washing and soil flushing remedies originally selected in the ROD, the remedy described in this amendment is to seal areas where surface contamination exceeds the ROD established soil cleanup goal - 700 ppm total carcinogenic polycyclic aromatic hydrocarbons (cPAH)<sup>2</sup> - with a reinforced concrete cover. The ROD established 700 ppm as the soil cleanup goal to "... prevent against an excess lifetime increased cancer risk of  $8 \times 10^{-6}$  for likely on-site exposure to soil."<sup>3</sup> Site risk is further discussed in this amendment under the title "Summary of Rationale for Changing the Remedy Selected in the ROD." This amendment affects only the soil remedial action whereas on site groundwater remedial action remains unchanged.

<sup>1</sup> The carcinogenic compounds are benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene and ideno(1,2,3-cd)pyrene.

<sup>2</sup> "Record of Decision," South Cavalcade Street Site," USEPA, September 16, 1988, p. 15. (See Administrative Record)

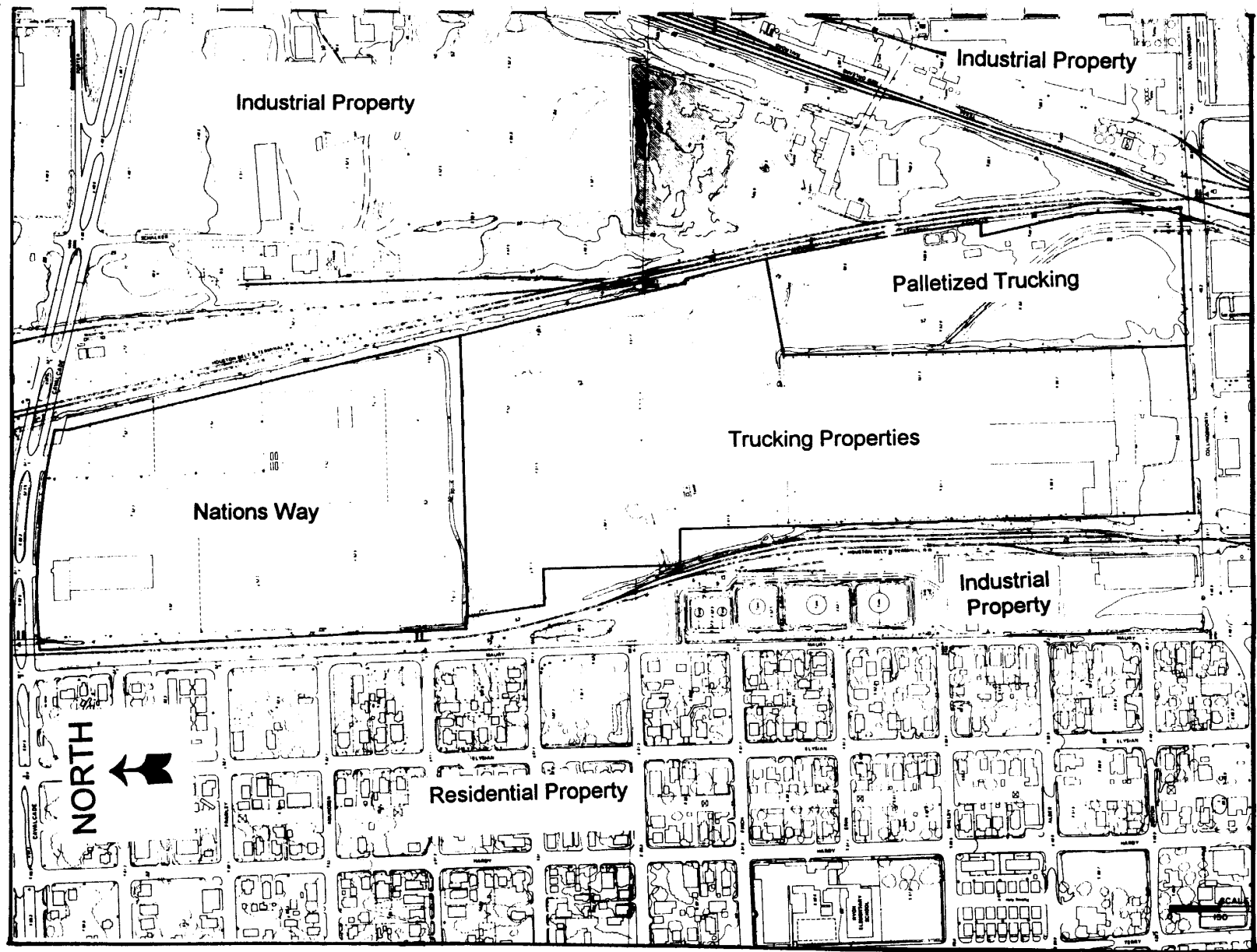
<sup>3</sup> ROD, p. 32.

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SITE VICINITY MAP

FILE NO. 85-317  
FIGURE 1



012881

Since capping contamination changes the remedial approach originally established in the ROD, EPA considers this a "fundamental" change and must amend the ROD in accordance with the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), Section 117(c), 42 U.S.C. § 9617(c), and the 1990 National Contingency Plan (NCP) at 40 CFR § 300.435(c)(2)(ii). However, as explained in the following paragraphs, EPA believes this change will continue to protect human health within the acceptable risk range defined in the NCP at 40 CFR § 300.430(e)(2)(i)(A)(2).

e. Summary of the Circumstances Requiring an Amendment. The remedy originally selected for soil at this site was soil washing and soil flushing.<sup>4</sup> However, on September 25, 1992, EPA approved the August 1992, Keystone Environmental "Soil Delineation Report" which concluded that the estimated soil quantity requiring remediation was significantly less than the ROD estimate. As a result, the report concluded that it would be more efficient and cost effective to use one remediation technology rather than two.<sup>5</sup> EPA agreed with the soil delineation proposal and granted BEI approval to begin remedial design using only soil washing.<sup>6</sup>

In 1993, during the remedial design phase BEI conducted a soil washing pilot study; however, the study did not conclude that soil washing would provide overall protection of human health and the environment because forty percent of the soil volume could not be washed to meet the remedial goals. Consequently, there was no benefit to implement full scale operations. Thereafter, BEI stated that it did not believe contamination beneath the surface posed a realistic health risk and petitioned EPA to reconsider the reasonableness of any risk posed by such contamination. After lengthy review and serious discussions with BEI, EPA decided that as long as the contamination remained below the surface, it posed no unacceptable risk.<sup>7</sup> As a result on September 29, 1995, BEI proposed permanently covering the contaminated areas with a concrete cap in lieu of the originally selected remedies.<sup>8</sup>

## 2. REASONS FOR AMENDING THE ROD.

a. Soil Remedy Selected in the ROD. As previously stated, the remedy selected in the ROD was flushing and washing approximately 30,000 cu. yd. of a contaminated soil cross section from the surface down to a depth of six feet.<sup>9</sup> Through soil flushing, contaminated soil zones would have been remediated through a physical-chemical in situ soil flushing process which would have continually passed an aqueous solution, containing surfactants or other chemicals, through contaminated areas to release the contaminants. As the released contaminants moved out of the contaminated zone they would have been captured and treated by collection and treatment systems. The contaminants would have in effect been flushed out of the contaminated zone.

Through soil washing, excavated soils would have been removed to an on-site washing facility which would have washed the contaminants from the soil into a wash water which would have been treated with screens, centrifuges, flocculators and clarifiers to remove the contaminants. The treated water would have been recycled for additional soil washing use.

b. Summary of Rationale for Changing Remedy Selected in the ROD. As described in a previous section titled "Summary of the Circumstances Requiring an Amendment," EPA reconsidered the soil flushing remedy and proposed to abandon it after concluding that estimated soil quantity requiring remediation was significantly less than originally estimated. Therefore, it would be more efficient and cost effective to use one remediation technology rather than two. In 1993, during the design effort BEI conducted a soil washing pilot study; however, the study's results did not conclude that soil washing would provide overall protection of human health and the environment because the pilot test demonstrated that forty percent of the soil volume could not be washed to meet the remedial goal. Consequently, the final volume and disposal of soil that would remain contaminated was uncertain, so there was no benefit to beginning full scale operations. These pilot study findings presented new information that fundamentally changed the performance and cost of the selected remedy. Therefore in accordance with the NCP 40 CFR § 300.435, EPA amended the ROD for this site. When evaluating the BEI proposal to

<sup>4</sup> ROD, p. 30.

<sup>5</sup> "Soil Delineation Report," Keystone Environmental Resources, Inc., pp 4-1 to 4-6, August 1992. (See Administrative Record)

<sup>6</sup> USEPA letters to Beazer East, September 2, 1992 and September 25, 1992. (See Appendix A)

<sup>7</sup> USEPA letter to Beazer East, September 7, 1995 (See Appendix A)

<sup>8</sup> Beazer East letter to USEPA, September 29, 1995 (See Appendix A)

<sup>9</sup> ROD, p. 18.

contain the wastes at the site, EPA considered the May 25, 1995, *Land Use in The CERCLA Remedy Selection Process* (OSWER Directive 9355.7-04). As described in the NCP, 40 CFR § 300.430.(a)(1)(iii)(A), EPA prefers permanent solutions to reduce the toxicity, mobility, or volume of the wastes and the treatment of all principal threats. However, in 1991, three years after the ROD was signed, EPA published guidance defining "principal threat."<sup>10</sup> In accordance with that guidance, EPA did not consider the contamination on site to be a principal threat since the base line risk assessment did not identify any health hazard from any of the soil contaminants on site greater than 1 in 1000 ( $1 \times 10^{-3}$ ).<sup>11</sup> Therefore, since the waste on site is not considered a principal threat the NCP 40 CFR § 300.430.(a)(1)(iii)(B) now allows EPA to use "... engineering controls, such as containment, for waste that poses a relatively long term threat."<sup>12</sup> EPA believes a concrete cover will provide reliable protection...

As a result of BEI's proposal, EPA re-evaluated the reasonably anticipated land use and the potential exposure pathways (see Table 1) for the designated land use from the original Record of Decision. Using the aforementioned land use assumptions EPA developed future land use assumptions with information such as population growth patterns, accessibility to the site, institutional controls in place and site location.<sup>13</sup> This evaluation led EPA to conclude that the current land use, freight truck terminals, will continue to be the land use for the foreseeable future and will remain nothing other than industrial use because of population growth patterns, accessibility to the site, institutional controls and its location. This is a change from EPA's original land use assumptions.

At the time that the site was under investigation, inadvertent ingestion, dust inhalation, and direct contact by utility or construction workers were likely exposure assumptions. However, as a result of an Administrative Order on Consent, entered in 1992, each landowner has placed a deed notice on file to alert future landowners that contamination remains on site.<sup>14</sup>

The order also prevents landowners from drilling water wells on site; requires landowners to preserve, protect, repair and maintain existing concrete foundations and paved areas; and provides notice that residential use of the site is inappropriate.<sup>15</sup> Consequently, this pathway is no longer realistic because future owners are forewarned and can take measures to protect utility or construction workers from inadvertent ingestion, dust inhalation and direct contact with contaminants on the site.

Although inadvertent ingestion and direct contact with drainage ditch sediments by trespassing children was considered a potential exposure according to the remedial investigation studies, this exposure had a maximum noncarcinogenic hazard index of less than 0.01 and a maximum excess lifetime cancer risk of  $1 \times 10^{-6}$ . The risk estimate for this exposure pathway is within the acceptable range defined in the NCP, 40 CFR § 300.430(e)(2)(i)(A)(2).<sup>16</sup>

#### EXPOSURE PATHWAYS

- Inadvertent ingestion, dust inhalation, and direct contact with surficial soils by utility or construction workers;
- Inadvertent ingestion and direct contact with drainage ditch sediments by trespassing children; and
- Inadvertent ingestion and direct contact with surface soils by future residents if the site were ever developed.
- Inadvertent ingestion and direct contact with surface soils by on-site commercial occupants

Table 1 Four Exposure Pathways Assumptions.

<sup>10</sup> "A Guide to Principal Threat and Low Level Threat Wastes," USEPA, Office of Solid Waste and Emergency Response (OSWER) Directive No. 9380.3FS, November 1991.

<sup>11</sup> "Feasibility Study," Keystone Environmental Resources, Inc., p. 2-28a, August 1988. (Administrative Record)

<sup>12</sup> National Contingency Plan (NCP) 40 CFR § 300.430.(a)(1)(iii)(B).

<sup>13</sup> "Land Use in the CERCLA Remedy Selection Process," USEPA, Office of Solid Waste and Emergency Response (OSWER) Directive No. 9355.7-04, p. 5.

<sup>14</sup> Administrative Order on Consent (AOC), Docket Number 6-08-92, June 9, 1992. (See Appendix C)

<sup>15</sup> AOC, 1992, p. 7.

<sup>16</sup> "ROD, p. 15.

In addition, since the site is a potential brownfield<sup>17</sup> bordered by two railroads, above ground petroleum product storage tanks, warehouses and other light industries, future residential development is unlikely. Therefore, inadvertent ingestion direct contact with surface soils by future residents is also unlikely. Furthermore, as previously mentioned, the notice record pursuant to the AOC states that residential land use is inappropriate. Therefore, this pathway does not present an unacceptable risk to human health and the environment.

The fourth exposure pathway, "inadvertent ingestion and direct contact with surface soils by on-site commercial occupants"<sup>18</sup> is the most realistic and probable exposure pathway. However, this pathway can be severed with a concrete cap covering all known contaminated areas, effectively severing the contaminant exposure pathway for on-site commercial occupants. Consequently, EPA believes that a concrete cap will be protective of human health and the environment, and as long as the cap remains in place the risk will remain less than  $1 \times 10^{-6}$  because there will not be an exposure pathway.

EPA does not anticipate population growth within the area because this area of Houston is "built out" indicating that population growth has mostly peaked. Access from two major freeways, IH 610, and U.S. 59 make the site ideal for continued trucking terminal operations. Furthermore, an administrative order on consent provides an institutional control to discourage residential land use.

Lastly, the site's location within an existing industrial corridor, bordered by railroad tracks and next door to a fuel distributor as well as a meat rendering plant, most likely will ensure the site will remain industrial. Consequently, EPA concluded that unrestricted site use is not probable and since there is no principal threat on site, EPA no longer believes treatment is appropriate because it can not cost effectively achieve EPA's remediation goals. Therefore, EPA has amended the ROD for this site because it believes the BEI arguments for covering the contaminated areas with a concrete cap have merit.<sup>19</sup>

To summarize the reasons for amending the ROD, the soil washing pilot study did not conclude that soil washing would provide overall protection of human health and the environment because the pilot test demonstrated that forty percent of the soil volume could not be washed to meet the remedial goal. Instead, BEI proposed permanently covering contaminated areas with a concrete cap. EPA evaluated the land use and concluded that, given the current and most reasonably anticipated land use, the concrete cap could adequately protect human health and the environment by severing exposure pathways.

**3. DESCRIPTION OF THE NEW ALTERNATIVE.** The concrete cap described in this Amended ROD will seal and contain contaminated soils beneath at least six inches of steel reinforced concrete designed to withstand the current and anticipated freight truck traffic.

a. **Design Parameters.** To ensure the cap will withstand truck traffic EPA will ensure the cap is designed in accordance with the design practice specified by American Concrete Institute Code 330, "Guide for Design and Construction of Concrete Parking Lots." The cap will be designed to provide positive drainage to eliminate standing rainwater and will cover all presently known contaminated surface soils. Site drawings showing the areas requiring cover are included as Appendix B. In addition, when the cover is completed a survey plat will be prepared showing the exact location and dimensions of each contaminated area with respect to permanently surveyed benchmarks. The plat must be prepared by and certified by a professional land surveyor. The plat will become part of the institutional control used to alert subsequent owners that contamination is left on site.

Although the concrete cap will not treat contaminated soil it will provide a barrier preventing on site commercial occupants from inadvertently ingesting, inhaling or directly contacting contaminated soils.

b. **Closure and Post Closure Care.** As part of the remedy closure and post closure care will be provided. Closure and post closure care includes the 40 CFR §264.119(b)(1)(iii) requirement cited in Table 3 and those requirements in the following paragraphs.

<sup>17</sup> A brownfield is an abandoned, idled or under-used industrial and commercial facility where expansion or redevelopment is complicated by real or perceived environmental contamination.

<sup>18</sup> ROD, p. 14.

<sup>19</sup> BEI letter, Sept 29, 1995 and EPA letter, Oct 5, 1996 (See Appendix A)

i. **Groundwater Monitoring System.** In accordance with the original Record of Decision, if the monitoring system indicates that contaminants left in place are leaching from the soils now under existing structures EPA will have to determine if further remediation is necessary.<sup>20</sup> Consequently, the current groundwater remedial action must consider the effects of leaving this soil contamination in place and ensure it does not adversely affect the selected groundwater remedy.

ii. **Post Closure Plan.** After the contaminated soils are covered a post closure plan that describes the maintenance activities that will be carried on after the contaminated soils are covered will be prepared and executed.

4. **MAJOR ARAR'S.** CERCLA, Section 121(d)(2) requires remedial actions to at least attain ARAR's, 42 U.S.C. § 9621(d)(2). Applicable requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under Federal or State law that specifically address a hazardous substance at a Superfund site. Relevant and appropriate requirements are standards, which while not "applicable" at a CERCLA site, address problems or situations sufficiently similar to those encountered at the site that their use is warranted. EPA recognizes the three ARAR categories defined in Table 2. While EPA does not believe there are any requirements applicable to the remedy outlined in this

- **Chemical Specific.** Those requirements which establish the acceptable amount concentration of a chemical that may be found in, or discharged to the ambient environment
- **Location Specific.** Those requirements which restrict the concentration of hazardous substances or the conduct of activities solely because of the site's location, i.e. floodplain, wetlands, historic places and sensitive habitats.
- **Action Specific.** Those technology or activity based requirements on actions taken with respect to hazardous wastes. These requirements indicate how a selected remedial action must be achieved.

Table 2. ARAR Categories.

**40 CFR, Part 264 - Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities**

- Subpart G - Closure and Post Closure, §264.119(b)(1)(iii).
- Subpart N - Landfills, §264.310(a)(1), §264.310(a)(2), §264.310(a)(3), §264.310(a)(4), §264.310(b)(1), and §264.310(b)(5).

Table 3. Relevant and Appropriate Requirements.

Amended ROD, the requirements in Table 3 are relevant and appropriate.

5. **EVALUATION OF ALTERNATIVES.** To properly consider a ROD amendment EPA has traditionally evaluated the originally selected remedy and the amended remedy by comparing them against the nine criteria identified in Table 4 to ensure that the amended remedy reflects the scope, purpose and a long term comprehensive response for the site after discovering significant new information to support an amendment.<sup>21</sup> In addition, in the case of this Amended ROD, EPA also considered the presumptive remedies described in "Presumptive Remedies for Soils, Sediments, and Sludges at Wood Treater Sites," EPA/540/R-95/128.

a. **Overall Protection of Human Health and the Environment.** The concrete cap will adequately protect human health and the environment by severing the most realistic and probable exposure pathway: inadvertent ingestion and direct contact with surface soils by on-site commercial occupants. Consequently, as long as the land use remains similar to the present use and the concrete cap remains in place, the amended remedy will be protective, cost effective and efficient. Since the soil washing pilot test study did not conclude that soil washing would provide overall protection of human health and the environment as described above, capping provides greater overall protection than the remedy selected in the ROD.

<sup>20</sup> ROD, p. 20.

<sup>21</sup> NCP, 40 CFR §300.430(f), "Selection of Remedy."

b. Compliance With Applicable or Relevant and Appropriate Requirements. It is possible to construct a con cap which will meet the requirements of the ARAR's identified above which require the remedy to minimize the need for fu maintenance and control post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-of hazardous waste decomposition products to the ground or surface waters or to the atmosphere.<sup>22</sup> The previous remedy, washing, would not meet the ARAR's.

c. Long - Term Effectiveness and Permanence. Since the originally selected remedy could not treat the soils to meet the remedial goal, it failed to demonstrate the long term effectiveness anticipated in the 1988 ROD. However, a concrete cap can be designed to provide adequate long term protection. Concrete's performance is well documented and with minimal maintenance EPA expects that a concrete cap can provide a durable barrier protecting the environment indefinitely with minimal long term operation and maintenance requirements.

- Overall Protection of Human Health and the Environment
- Compliance With Applicable or Relevant and Appropriate Requirements
- Long-Term Effectiveness and Performance
- Reduction of Toxicity, Mobility or Volume Through Treatment
- Short-Term Effectiveness
- Implementability
- Cost
- State Acceptance
- Community Acceptance

Table 4. The Nine Criteria.

d. Reduction of Toxicity, Mobility or Volume Through Treatment. While EPA recognizes this criteria applies only to treatment, a concrete cap will reduce toxicity by severing the most likely potential exposure pathway. In addition, since water is the only medium most likely to mobilize the contaminant, a concrete cap will greatly reduce the amount of water contacting the contaminant. Although the remedy does not provide soil treatment, since EPA believes that the current land use, freight truck terminals, will continue to be the land use for the foreseeable future, treatment provides no apparent additional benefit.

e. Short-Term Effectiveness. When compared to the originally selected remedy, the amended remedy will provide equal or better short-term effectiveness. With either remedy there is, albeit small, a probability that remedial action workers could receive a harmful exposure from fugitive dust generated during construction. However, this potential threat will be minimized by implementing appropriate worker health and safety procedures. Constructing the originally selected remedy was expected to take up to five years, whereas constructing a concrete cap is expected to take less than one year.

f. Implementability. In comparison to the originally selected remedy, the concrete cap is implementable whereas soil washing was not implementable. Although the feasibility study indicated soil washing was implementable, the full scale pilot test demonstrated that soil washing could not consistently and efficiently meet remediation goals. The amended remedy is implementable since it is easy to construct with readily available skills and materials, and is reliable and is easy to maintain.

g. Cost. When comparing present worth costs, constructing a concrete cap will cost approximately \$697,000 whereas the soil washing is currently estimated to cost in excess of \$6,800,000. There will be no operation costs associated with the concrete cap. Since the cap will serve as truck terminal pavement, the fact that the cap covers contaminated soil will not add to the pavement maintenance normally required for terminal operations. Therefore operation and maintenance are not considered in the cost of this concrete cap.

The originally selected remedy did little to control clean up cost. As demonstrated during the soil washing pilot project, successful treatment was uncertain because the final volume and disposal of remaining contaminated soil could not be estimated with any acceptable certainty. Uncertainty increases the financial risk for contractors bidding the remedial work, and greater financial risks will increase the bid price. By eliminating the uncertainty of treatment success, the financial risk is reduced and costs are kept under control.

h. State Acceptance. The Texas Natural Resource Conservation Commission (TNRCC) reviewed this amendment. The TNRCC concurred with this ammendment in a February 21, 1997 letter to EPA. This letter is included in the Administrative Record.

<sup>22</sup> 40 CFR, Part 264 - Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities: Subpart G - Closure and Post Closure, § 264.111(a) & (b)

i. Community Acceptance. The Amended Proposed Plan was released for public comment on February 10, 1997 and EPA conducted a public meeting on February 21, 1997. Appendix D attached to this Amended ROD is EPA's response to the comments EPA received during the comment period. None of the comments required EPA to make any significant changes to the proposed plan. The community has been satisfied with the work to date and the current landowners have accepted the proposed remedy (See Appendix A, letter dated October 20, 1995 and January 8, 1996 and Appendix B). Furthermore, the site is a potential "brownfield." Therefore EPA believes a concrete cap covering contaminated areas will reduce the originally estimated five year<sup>23</sup> cleanup duration to less than one year. This would allow property owners to quickly expand current terminal operations thus increasing the local tax base and stimulating job growth while providing a protective remedy. Consequently, a cap will encourage economic development by returning the property to its full potential.

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<sup>23</sup> ROD, p. 20.

## **APPENDIX A - CORRESPONDENCE**

September 2, 1992

Shannon Craig  
Beazer East, Inc.  
436 Seventh Avenue  
Pittsburgh, Pennsylvania

RE: South Cavalcade Site

Dear Shannon:

Reference the August 1992 "Soil Delineation Report" Keystone Environmental Resources Inc. transmitted to our office on August 3, 1992. We will approve this report if Beazer East Inc. (BEI) makes the report revisions described in the following paragraphs. Rather than producing another report binder we will accept these revisions as an addendum to be filed with the report. Please ensure each item in the addendum states the page and paragraph requiring a change. Please provide our office with the addendum no later than September 23, 1992.

#### REPORT REVISIONS

Reference page 3-4 and 3-5, "Northwestern Area." The report does not describe the "concern." Request you revise the report to describe the "concern" by stating aerial photographs show a pond in the northwest quadrant from about 1957 to 1969. However, aerial photographs after 1969 no longer show the pond. EPA requested BEI to compare the pond's location to soil sampling locations G-38, G-39, G-40 and G-41. EPA wanted to ensure that if the pond had ever been used as a waste pit that the soil samples were in fact collected from the former pond site thus confirming the presence or absence of soil contamination. Note the paragraph could lead a reader to believe the aerial photographs show staining, and that was not the case.

Reference figure 3-1, "Southeastern Area Soil Sampling Locations." The drawing legend does not define the crosshatched areas. Please revise the legend to define the crosshatched areas.

Reference page 4-2, the first paragraph. EPA did not request BEI to conduct additional sampling of "clean" soils. EPA and BEI disagreed upon the number of samples used to define a soil as clean. EPA never agreed the samples were previously characterized as "clean" as the paragraph implies; this was BEI's characterization. EPA does not believe these soils were properly characterized as either "clean" or dirty. Per our agreement with BEI, BEI will conduct further testing. Revise the report to first describe the disagreement between EPA and BEI and then describe the agreement EPA and BEI reached to resolve the disagreement.

Reference page 4-2. The report does not describe the location of the soils in question. Revise the report to state that EPA and BEI disagreed with the interpretation of soil test results that indicated a clean 0 - 2' soil layer overlying soil in which

contamination exceeded the remedial action level because EPA and BEI could not agree upon why the contamination was not present in the 0 - 2' layer but present in underlying layers.

Reference page 4-3. We do not believe the report clearly states that sample average and field standard deviation for each pile will determine the required remedial action for each pile. Please revise the report to state that BEI will average the 7 CPAH concentrations from each soil pile. If the average CPAH concentration is below the remedial action level and if the field standard deviation is equal to or less than the standard deviation originally used to determine the number of samples collected, BEI will consider the average soil pile concentration is below the remedial action level. However, if the average of the 7 CPAH concentrations from each pile is above the remedial action level and the field standard deviation is equal to or less than that originally used to calculate the number of sample collected, BEI will consider the average soil pile concentration above the remedial action level and BEI will wash the entire soil pile. In either case if field standard deviation is greater than that originally used to calculate the number of samples required, BEI will recalculate the number of samples using the field standard deviation. BEI will continue sampling until a field sample standard deviation correlates with the number of samples collected. Once no additional samples are required, BEI can assume the sample average is the average soil pile concentration and use the average to determine if the pile requires remedial action.

If you have any questions please call me at (214) 655-8523.

Sincerely,

Glenn Celerier, P. E.,  
Project Manager

cc: Mr. Mark McDonnell, Flour Daniel Inc.  
Mr. Steve Chong, Texas Water Commission

September 25, 1992

Ms. Shannon Craig  
Project Coordinator  
Beazer East, Inc.  
436 Seventh Avenue  
Pittsburgh, PA 15219

RE: South Cavalcade Superfund Site, Cooperative Agreement  
Schedule

Dear Shannon:

Reference Beazer letter dated September 22, 1992. We accept the  
Beazer East "Soil Delineation Report" addendum you submitted on  
September 22, 1992.

Sincerely,

Glenn Celerier, P.E.  
Project Coordinator

cc: Mark McDonnell, Flour Daniel, Inc.  
Steve Chong, Texas Water Commission

SEP 07 1995

Steve Radel  
Beazer East, Inc.  
436 Seventh Avenue  
Pittsburgh, PA 15219-1822

Dear Mr. Radel:

This letter is in response to Beazer's August 18, 1995, letter and the August 28, 1995, meeting between EPA and Beazer. As discussed in the August 8, 1995, EPA letter to Beazer, the consent decree executed by Beazer on or about June 11, 1990, gives EPA the authority to pursue further investigation to ensure that human health is protected from an actual release of a hazardous substance (CD p. 2). Current site conditions give EPA reason to believe that there may be additional contamination deeper than shown in the August 1992 soil delineation study. However, if there is little chance that humans will actually be exposed to contaminated soils deeper than two feet below the ground surface, EPA is willing to reconsider the risk those deeper contaminated soils pose to human health.

Although EPA is willing to reconsider the risk posed by potentially contaminated soils deeper than two feet, in the Consent Decree, Appendix I, Statement of Work, EPA represented to the public and current landowners that contaminated soil would be remediated to a maximum depth of six feet; therefore, the EPA must notify the public that it may not continue remedial action below two feet. Consequently, EPA intends to notify the public of its decision to cease excavation at two feet rather than at six.

EPA will consider public comments when it determines if there are unforeseen risks to human health from any contamination deeper than two feet. If, after reviewing any public comments, EPA determines that there is minimal risk to human health posed by contamination two feet deep, EPA will instruct Beazer to commence excavation.

Lastly, since EPA is considering changes to the remedial action it agrees to suspend the current construction schedule until it determines if there is any need to further pursue investigating soil contamination below two feet.

If you have any questions please call me at (214) 665-8523.

Sincerely,

Glenn Celerier, P.E.  
Project Manager

cc: Trey Collins, TNRCC  
Mark McDonnell, Fluor Daniel, Inc.  
Mike King, Palletized Trucking  
Robert Starnenberg, Trucking Properties  
Calvin Reeves, Baptist Foundation of Texas  
Ursula Lennox (6SF-LL)



BEAZER EAST, INC., 436 SEVENTH AVENUE, PITTSBURGH, PA 15219

012894

September 29, 1995

VIA AIRBORNE EXPRESS

Mr. Glenn Celerier, P.E.  
EPA Project Coordinator (6SF-AT)  
Superfund Programs Branch  
U.S. Environmental Protection Agency, Region VI  
Allied Bank Tower @ Fountain Place  
1445 Ross Avenue  
Dallas, TX 75202-2733

Re: Contemplated Soil Remedial Action Revision  
South Cavalcade CERCLA Site  
Houston, Texas

Dear Glenn:

This letter has been prepared in response to the United States Environmental Protection Agency's (EPA) letter of September 7, 1995 regarding EPA's contemplated revision to the soil remedy at the South Cavalcade CERCLA Site (Site) located in Houston, Texas. Specifically, EPA states in the subject letter that "if there is little chance that humans will actually be exposed to contaminated soils deeper than two feet below the ground surface, EPA is willing to reconsider the risk those deeper contaminated soils pose to human health." Further, EPA "intends to notify the public of its decision to cease excavation at two feet rather than at six" in order to inform the public of changes in the soil remedy and allow public comment. If EPA determines after a review of public comments "that there is minimal risk to human health posed by contamination two feet deep, EPA will instruct Beazer to commence excavation."

Beazer agrees with the EPA that soils at or near the ground surface represent the greatest potential exposure pathway to on-site commercial workers. Therefore, EPA's above referenced recommendation will mitigate the potential risk of exposure to these surface soils. However, Beazer believes that an alternate approach will effectively mitigate this potential risk of exposure as well or better than EPA's recommended alternative. This approach consists of a concrete cover over the identified areas of concern. The concrete cap will in fact be more protective than EPA's alternative because a permanent, impermeable barrier will be constructed in the designated areas of concern. This approach is also consistent with EPA's determination that the existing pavement and buildings effectively mitigate potential exposure to soils beneath these barriers. The following constitutes a

Page 2  
Mr. Glenn Celerier  
September 27, 1995

summary of the primary issues which support Beazer's recommendation to install a concrete cover in the designated areas of concern.

Beazer believes that surface soils, defined in the ROD as the "upper six inches of soil," constitute the primary risk to human health, not all soils within the two foot depth as stated in EPA's September 7, 1995 letter. The Final Public Health and Environmental Assessment ("Risk Assessment", August, 1988) identified the primary soil exposure pathways for the Site as dermal contact and inadvertent ingestion for on-site commercial occupants and utility workers (see below). It is unlikely that on-site commercial occupants will ever be exposed to COCs below six inches in depth via the principal exposure pathways of direct contact with soils and ingestion. On-site commercial activities include primarily tractor/trailer rig storage, loading and unloading. Therefore, on-site occupants would not be exposed to soils below six inches in depth during normal day-to-day activities. Only invasive activities at the Site related to the installation of structures and supporting underground utilities would potentially expose on-site construction workers to impacted soils below six inches in depth. Accordingly, Beazer believes that the primary risks to on-site commercial occupants and construction workers is limited to the upper six inches of soil. Excavating an additional eighteen inches to the two foot level provides no additional reduction in risk yet adds significant increase in cost.

The principal exposure pathways and human receptors were identified in the Risk Assessment and summarized in the ROD. The mitigation of human health risks via the identified exposure pathways for EPA's contemplated soil remedial alternative and Beazer's proposed concrete capping remedy is summarized below. For each exposure pathway, Beazer's proposed alternative, concrete capping, is equally or more protective than EPA's contemplated alternative.

- **Inadvertent ingestion and direct contact with surface soils by on-site commercial occupants.** The risks associated with impacted surface soils to on-site commercial occupants is primarily related to contact with airborne dust or with surface soils impacted with potentially carcinogenic polynuclear aromatic hydrocarbons (pcPAHs) and ingestion of these constituents. EPA's proposed remedy eliminates direct contact with soil to a depth of two feet. However, the Risk Assessment did not foresee any risk via this exposure pathway for soils deeper than six inches. Beazer's proposed concrete cap remedy removes any risk associated with this exposure pathway by providing a physical barrier to human contact.
- **Inadvertent ingestion and direct contact with drainage ditch sediments by trespassing children.** The primary transport mechanism for migration of soils impacted with pcPAHs is sediment in stormwater runoff. Through excavation and treatment of soil to two feet, EPA's contemplated alternative remedy would eliminate the migration of any impacted surface soils in stormwater sediments. However, soils below six inches in depth are not susceptible to stormwater runoff. Beazer's proposed

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Mr. Glenn Celerier  
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concrete cap eliminates stormwater contact with surface soils thus eliminating the transport mechanism and associated risks for this exposure pathway.

- Inadvertent ingestion, dust inhalation, and direct contact with surficial soils by utility or construction workers. The Risk Assessment addresses risks associated with future construction worker invasive activities such as new construction and associated utility installation which may expose workers to surficial soils impacted with pcPAHs. By providing a robust barrier which must be broken prior to any invasive work, Beazer's proposed concrete cap remedy is more protective of human health via this exposure pathway than EPA's proposed two foot excavation remedy. Both proposed remedies also rely on using institutional controls, as referenced in the ROD and recommended in EPA's Land Use Directive (OSWER Directive No. 9355.7-04; Land Use in the CERCLA Remedy Selection Process), to control these risks.

The ROD already provides for institutional controls to minimize the potential exposure to Site construction workers. EPA requires that "site owners add a notice to their deeds expressing that hazardous substances are located under concrete and buildings. EPA will require this to notify any potential purchaser of the Site about this contamination" (Page A-7 of the ROD). This notice can be modified to include areas of the Site that Beazer proposes to cap. The ROD and the Consent Decree further require that landowners provide notification to EPA of any proposed development in any area containing impacted soil. Further, access agreements are in-place between Beazer and all the Site landowners, and this agreement requires landowners to notify Beazer of any development at the Site which may involve invasive activities in impacted areas of the Site.

- Inadvertent ingestion and direct contact with surface soils by future residents if the site is ever developed. As stated in the Land Use Directive, EPA expects that the vast majority of Superfund sites will continue to be used as industrial sites. Future residential use at the South Cavalcade Site is highly unlikely. All three parcels of land at the Site are being used for trucking operations and it is expected that this type of land use will continue. In fact, NW Nations Way Transport Service, Inc. recently purchased the Site's northern tract from the Baptist Foundation of Texas with plans to expand the trucking terminal. Additionally, industrial sites surround nearly the entire 64-acre South Cavalcade Site, and active railroad tracks border both the east and west boundaries, making it extremely unlikely a tract of land such as this will ever be developed for residential use. Deed restrictions can be obtained from the land owners which will allow only future industrial/commercial utilization of the Site. Both Beazer's proposed capping and EPA's proposed two foot excavation soil remedies properly assume continued commercial/ industrial use of the Site, acknowledging the insignificantly small risk associated with this exposure pathway.
- Ingestion of groundwater if contamination continues to migrate or if water supply wells are ever installed on-site. Beazer has shown in extensive testing and analysis of

soil leaching potential that the COCs in the Site soils do not leach. To support the absence of risk to groundwater presented by leaving impacted soils in-place, over 250 soil samples have been collected and analyzed using TCLP to determine any leaching potential for soils impacted with pcPAHs. None of the more than 250 samples analyzed have shown leaching potential. Thus, there exists no risk of impact to groundwater associated with leaving any impacted soil in-place at the Site. The Site constituents simply do not leach from soil and this risk exposure pathway is a non-issue for impacted soil.

Further, the Site and surrounding areas are provided city water and water supply wells are not required or desirable.

Beazer's proposed concrete cap remedy provides even further assurance that this exposure pathway is a non-issue for impacted soil at the site by providing an impermeable barrier to rainfall infiltration. By removing the transport mechanism, the concrete cap eliminates all arguable risks, if any, that could be associated with this exposure pathway.

Beazer's proposed concrete cap would provide many benefits beyond those provided by EPA's proposed two foot excavation remedy. They include: consistency with the ROD-selected soil remedy for existing paved areas of the Site, reduction of the time frame for implementation of the soil remedy, elimination of potential exposure to construction workers during implementation of the soil remedy, and allowance of minimum disruption to ongoing trucking operations while more promptly providing beneficial land use to the community in full compliance with EPA's Land Use Directive. Each of these additional benefits are discussed below.

- Establish a consistent soil remedy throughout the Site. In the ROD, approximately 60% of potentially impacted soils were noted to be present beneath existing concrete and buildings in the southeast portion of the Site based on data collected during the RI. Per the ROD, these areas do not require remediation because the risks of dermal contact or inadvertent ingestion are mitigated by the barrier (the buildings and paving) between occupants and the impacted soil. Likewise, placing Beazer's proposed concrete cap over the remaining impacted areas provides the same mitigation of risk to on-site occupants.
- Eliminate potential exposure to construction workers during soil remedy implementation. The EPA's proposed revision to this remedy will require excavation, handling, hauling and processing of impacted soils; stormwater run-on and runoff control and treatment; and residual materials handling and disposal. In addition, residual materials may require off-site disposal at an approved TSD facility, and there are additional risks of human exposure during loading, transportation, off-loading, disposal and decontamination activities.

Page 5  
 Mr. Glenn Celenier  
 September 27, 1995

Beazer's proposed cap will practically eliminate these risks. Nearly all areas of the proposed cap will be designed for installation at or above the existing exposed ground surface, therefore, invasive activities will be limited. Dust control measures will be implemented to ensure a minimal amount of worker exposure during construction of the concrete cap.

- **Reduce the time frame for soil remedy completion and provide beneficial land use for the community.** The cap remedy is consistent with the ROD and EPA's Land Use Directive in providing a preference for continued beneficial use of the property. Implementation of the current remedy and EPA's revision of this remedy will require a one to two acre Site area for the construction and operation of the EPA approved bioremediation cells. Bioremediation of impacted Site soils pursuant to EPA's proposed two foot excavation remedy may take up to five years to complete. During this time frame, the one to two acre bioremediation cell area will be unusable. Capping of the impacted soil areas pursuant to Beazer's proposed remedy will require only months to complete thereby greatly reducing remedial operations related exposure risk and promptly placing the Site back into a productive and beneficial commercial/industrial use.

Beazer's proposed concrete cap has the additional benefit of providing a structure which enhances the use of the Site for trucking operations. EPA's Land Use Directive considers land use in making remedy selections under CERCLA and can be applied to remedy modifications as well. EPA acknowledges in this guidance the importance of continued land use in remedy selection. As stated on Page 1 of the Land Use Directive, "EPA acknowledges the importance of land use in determining cleanup levels and remedies... and expects that the vast majority of sites with current industrial/commercial uses (70% of all Superfund sites) will continue to be used as commercial or industrial sites...". Beazer's proposed concrete cap remedy provides beneficial continued commercial/industrial utilization of the Site to the maximum extent possible while minimizing risks to human health and the environment.

In conclusion, Beazer supports EPA in its effort to effectively mitigate risks at the Site and to minimize the time frame required for soil remediation. While EPA's proposed two foot excavation soil remedy effectively addresses all contemplated risks to Site occupants and construction workers, Beazer's proposed capping remedy provides equal or improved risk reduction and the additional benefits associated with a more prompt, efficient, and consistent remedy as described above. The ROD already acknowledges the equal to or improved risk reduction provided by concrete capping through its allowance for leaving impacted soils in-place at the Site under existing concrete and buildings. Further, legally binding documentation in the form of deed restrictions, as referenced in the ROD, access agreements, the ROD, and the Consent Decree require that land owners provide notification to EPA and Beazer of any invasive activities that may conceivably disrupt the integrity of such a cap. Finally, Beazer has already implemented an extensive groundwater remediation and monitoring program at the Site and will closely monitor the progress of

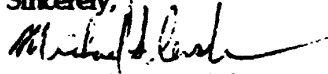
Page 6  
Mr. Glenn Celerier  
September 27, 1995

012899

groundwater remediation at the Site to ensure that the remaining exposure pathway, if any, is controlled.

Beazer agrees with EPA that revisions such as those discussed herein will require public notification and comment. Beazer is confident that all community concerns can be addressed promptly and adequately and will provide EPA with any support required. We look forward to EPA's positive response to Beazer's proposed concrete cap.

Sincerely,



Michael Slenska, P.E.  
Project Manager

cc: R. Lucas - Beazer (w/o Attachment)  
S. Radel - Beazer  
M. White - Baker & Botts  
Office of Regional Counsel, EPA - Region VI  
Chief - Texas Construction Section, EPA - Region VI  
T. Collins - South Cavalcade Superfund Site Coordinator (TNRCC)  
M. McDonnel - Fluor Daniel  
B. Hickman - Turner & Associates  
J. Zubrow - KEY Environmental, Inc.  
M. Bruchman - Dames & Moore, N.C.  
T. Hopper - Dames & Moore, Houston

OCT 05 1995

**Mike Slenska  
Beazer East, Inc.  
436 Seventh Avenue  
Pittsburgh, PA 15219-1822**

**RE: Contemplated Soil Remedial Action Revision, South Cavalcade  
Superfund Site, Beazer Ltr dated September 29, 1995**

**Dear Mr. Slenska:**

We reviewed the referenced letter in which Beazer proposes capping "areas of concern" with concrete and believe the proposal has merit. However, before we can consider this proposal further we would like additional information. Consequently, we request Beazer provide the following information:

- Define the "area of concern" referenced in Beazer's letter
- Provide a conceptual cap design (plan and cross section dimensions, location, general specifications, and construction quality assurance)
- Provide an economic analysis comparing cap and bioremediation cost
- Provide a design and construction schedule
- Provide a general description of the maintenance required to maintain the cap's integrity
- Provide assurance that the land owners do not object to a cap in lieu of bioremediation

After we review the information Beazer provides we will determine if Beazer's proposal to change the remedy is appropriate. If you have any questions please call me at (214) 665-8523.

Sincerely,

---

Glenn Celerier, P.E.  
Project Manager



012902

BEAZER EAST, INC., 436 SEVENTH AVENUE, PITTSBURGH, PA 15219

October 20, 1995

Nations Way Transport Service, Inc.  
5601 Holly Street  
Commerce City, Colorado 80022

Attn: Mr. Monte Hutchinson  
Senior Vice President  
Transportation and Maintenance

RE: Concurrence with Site Capping  
South Cavalcade CERCLA Site  
Houston, Texas

Dear Monte:

This letter is a follow-up to our telephone conversation during the last week of September, 1995, in which we discussed the possibility of placing a concrete cover over the impacted soil areas of the South Cavalcade CERCLA Site (Site). As we discussed, this concrete cover would be in lieu of bioremediation for the impacted Site soils. This letter is intended to confirm in writing your verbal concurrence with the proposed concrete cover as a modified soil remedial action.

On Sept. 29, 1995, Beazer East, Inc. (Beazer) submitted a letter to the United States Environmental Protection Agency (EPA) which sets forth the risk analysis and rationale in support of concrete capping as the most cost effective and preferred alternative soil remedy for the Site. That letter is attached for your review. In response to Beazer's submittal, the EPA requested that we provide additional information concerning the proposed concrete cap. EPA's Oct. 5, 1995 request letter is also attached for your review. Included in the EPA letter is a request that Beazer "Provide assurance that the land owners do not object to a cap in lieu of bioremediation."

There are two impacted soil zones located on the grassy area just south of the maintenance shop on Nations Way Transport Service, Inc. (Nations Way) property which cover a total area of approximately 1,750 square feet. As we discussed, this is a relatively small area and Beazer believes that the most appropriate remedial action may be to excavate and dispose of this material at an off-site disposal facility. However, this remedial option for the soils on your property has not been finalized. In the event that alternate plans are necessary, Beazer will develop plans and specifications to place a concrete cover over the impacted soil areas at an elevation above the existing grades.

Beazer is preparing a conceptual design submittal to provide the EPA with the requested additional information, and in that submittal Beazer will propose excavation and off-site disposal

for the impacted soils on your property. However, should the EPA require the concrete cover to be placed over all impacted soil areas, the conceptual design will be revised to include sketches of the concrete cover arrangement consistent with the configuration described above. Additionally, it is Beazer's hope to include the above referenced assurance of landowner concurrence with the conceptual design submittal.

Beazer believes that the signed Access Agreement already in existence between Beazer and Nations Way provides any requisite authorization needed for Beazer to implement the Record of Decision (ROD) selected remedy, whether amended or modified to provide for alternative remedial action such as concrete capping. Nevertheless, as a courtesy to Nations Way, and in order for Beazer to provide to EPA the above noted assurance, and to ensure that open communications are maintained between Beazer and Nations Way, Beazer is forwarding this request for written confirmation of our previous discussions. To confirm your prior verbal concurrence with using an alternative soil remediation plan, including excavation and off-site disposal or a concrete concrete cover, in lieu of bioremediation please sign on the space provided below and return the original to my attention using the enclosed self-addressed overnight envelope, retaining a copy for your files. A copy of this signed letter will be included in our conceptual concrete cover design submittal to the EPA. Should Beazer receive EPA approval to proceed with a detailed design of the concrete cover, or excavation and off-site disposal of the impacted soils on your property, Beazer will work with Nations Way to accommodate any reasonable comments or concerns regarding the design.

If you should have any questions or require additional information please contact me at (412) 227-2174

Sincerely,

Michael Slenska, P.E.  
Project Manager

**Approved by:**

Motylchowski

10/25/95

**Mr. Monte Hutchinson**  
**Senior Vice President**  
**Transportation and Maintenance**

## Attachments

cc: Steve Radel  
Bob Lucas  
Troy Hopper, Dames & Moore



BEAZER EAST, INC., 436 SEVENTH AVENUE, PITTSBURGH, PA 15219

October 20, 1995

012904

Trucking Properties, Inc.  
Wedge International Tower  
1415 Louisiana, Suite 3000  
Houston, Texas 77002

Attn: Mr. Robert E. Sternberg  
President

RE: Concurrence with Site Capping  
South Cavalcade CERCLA Site  
Houston, Texas

Dear Bob:

This letter is a follow-up to our Sept. 21, 1995 meeting in which we discussed the possibility of placing a concrete cover over the impacted soil areas of the South Cavalcade CERCLA Site (Site). As we discussed, this concrete cover would be in lieu of bioremediation for the impacted Site soils. This letter is intended to confirm in writing your concurrence with the proposed concrete cover as a modified soil remedial action as you verbally expressed during the above referenced meetings.

Following our Sept. 21, 1995 meeting, Beazer East, Inc. (Beazer) submitted a letter to the United States Environmental Protection Agency (EPA) which sets forth the risk analysis and rationale in support of concrete capping as the most cost effective and preferred alternative soil remedy for the Site. That letter, dated Sept. 29, 1995, is attached for your review. In response to Beazer's submittal, the EPA requested that we provide additional information concerning the proposed concrete cap. EPA's Oct. 5, 1995 request letter is also attached for your review. Included in the EPA letter is a request that Beazer "Provide assurance that the land owners do not object to a cap in lieu of bioremediation."

For the impacted soil areas located on Trucking Properties, Inc. (TPI) property the concrete cap would cover approximately sixty percent of the small grassy area located just south of the warehouse. We anticipate that the concrete cover would be placed above the existing grades in this area, and would include a small ramp making the cover accessible for personal vehicle parking.

Beazer is preparing a conceptual design submittal to provide the EPA with the requested additional information. This conceptual design will include sketches of the concrete cover arrangement consistent with the configuration described above. Additionally, it is Beazer's hope to include the above referenced assurance of landowner concurrence with the conceptual design submittal.

Beazer believes that the signed Access Agreement already in existence between Beazer and TPI provides any requisite authorization needed for Beazer to implement the ROD selected remedy, whether amended or modified to provide for an alternative remedial action such as concrete capping. Nevertheless, as a courtesy to TPI, and in order for Beazer to provide to EPA the above noted assurance, and to ensure that open communications are maintained between Beazer and TPI, Beazer is forwarding this request for written confirmation of our previous discussions. To confirm your prior verbal concurrence with using a concrete cover in lieu of bioremediation please sign on the space provided below and return the original to my attention using the enclosed self-addressed overnight envelope, retaining a copy for your files. A copy of this signed letter will be included in our conceptual concrete cover design submittal to the EPA. Should Beazer receive EPA approval to proceed with a detailed design of the concrete cover, Beazer will work with TPI to accommodate any reasonable comments or concerns regarding the design.

If you should have any questions or require additional information please contact me at (412) 227-2174.

Sincerely,



Michael Slenska, P.E.  
Project Manager

Approved by:

 11/7/95  
Date

Mr. Robert E. Sternberg  
President - Trucking Properties, Inc.

**Attachments**

cc: Steve Radel  
Bob Lucas  
Troy Hopper, Dames & Moore

**PALLETIZED TRUCKING, INC.**  
2001 Collingsworth  
Houston, Texas

January 8, 1996

Mr. Glenn Celerier, P.E.  
Superfund Division  
U.S. Environmental Protection Agency  
1445 Ross Ave.  
Dallas, TX 75202

Re: South Cavalcade CERCLA Site, Houston, Texas  
Property Owner Consent to Concrete Capping Proposal

Dear Mr. Celerier:

Beazer East, Inc. has provided us with a copy of the final conceptual design report for its proposal of concrete capping as the remedy for contamination located on our property at the South Cavalcade CERCLA site in Houston, Texas. Beazer East, Inc. has asked us to give you our written consent to the concept of concrete capping. Our concerns about the proposal can be grouped generally into two types of issues, one of which is whether the proposal protects human health and the environment, and the other of which is how the new cap will affect the use and enjoyment of our property long term.

Based on my telephone conversations with you previously, we understand that the Environmental Protection Agency will approve the concrete capping proposal as a remedy for this CERCLA site only if you conclude that this remedy will protect human health and the environment as long as the contamination remains on this property. Therefore, we are deferring to the Agency with regards to these health and environmental considerations.

Beazer has given us certain assurances that it will address our other concerns about the concrete capping proposal, relating to the impact of the new concrete cap on a permanent basis as it affects our existing improvements and the operations on our property, by incorporating our reasonable comments and modifications into the final design, plans and specifications for the concrete cap, and by accommodating us on various issues relating generally to the construction process. In reliance upon those assurances, we are giving you this letter as evidence of our consent to the concept of concrete capping as a remedy for the contamination existing on this property.

Mr. Glen Celerier  
January 8, 1996  
Page 2

If you have any questions or require any additional information, please do not hesitate to contact me at (713) 225-3303.

Very truly yours,

PALLETIZED TRUCKING, INC.

By:   
Name: Michael Rex King  
Title: Vice President

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**APPENDIX B - CONCEPTUAL DESIGN OF CONCRETE CAP  
SOUTH CAVALCADE SUPERFUND SITE**

## 1.0 INTRODUCTION

On September 29, 1995, Beazer East, Inc. (Beazer) submitted a letter to the United States Environmental Protection Agency (EPA) which describes the risk analysis and rationale in support of concrete capping as the most cost effective and preferred alternative soil remedy for the South Cavalcade CERCLA Site (Site) located in Houston, Texas. On October 5, 1995, in response to Beazer's submittal, the EPA requested that Beazer provide additional information concerning the proposed concrete cover.

This Conceptual Design Report presents the requested additional information and includes: a general description of the proposed concrete cover configuration including preliminary drawings and specifications, a discussion of the additional tasks required to complete the proposed concrete cover detailed design, an economic evaluation comparing the proposed concrete cover to washing of the Site soils, documentation of property owner concurrence with using a concrete cap in lieu of ROD selected soil remedies, and a preliminary schedule for the design and construction of the proposed concrete cover.

## 2.0 CONCEPTUAL DESIGN

Beazer has developed a conceptual design configuration for each of the four main soil remediation areas of the Site. These four main areas, as shown on Figure 1, are the Southeast, Southwest, and Northeast Areas and the Groundwater Treatment Plant Area of the Site as described in the Soil Remedial Design - 100% Design Submittal, Dames & Moore, December, 1994. Several specific design criteria were used to develop the proposed concrete cover conceptual designs for each of the four soil remediation areas. These design criteria are presented below:

- Cover the Impacted Zones - As determined by the recently completed soil Confirmational Sampling Program, the impacted soil zones have been delineated and confirmed for each of the four main areas. The proposed concrete cover should, at a minimum, cover at least these impacted zones.
- Provide a Useable Concrete Cover - The concrete cover should be designed to allow use of the covered areas which is consistent with the current property operations.

- Minimize Impacted Soil Excavation - The design should minimize the amount of impacted soil requiring excavation during construction of the concrete cover. Any cut and fill required for construction of the concrete cap should achieve a balance such that excavated impacted material can be placed as fill over other impacted zones thereby limiting the need for off-site disposal of impacted material.
- Provide Adequate Drainage - The surface contours of the concrete cover should provide for positive drainage of the cover, and wherever possible remain consistent with the existing drainage patterns of the Site.

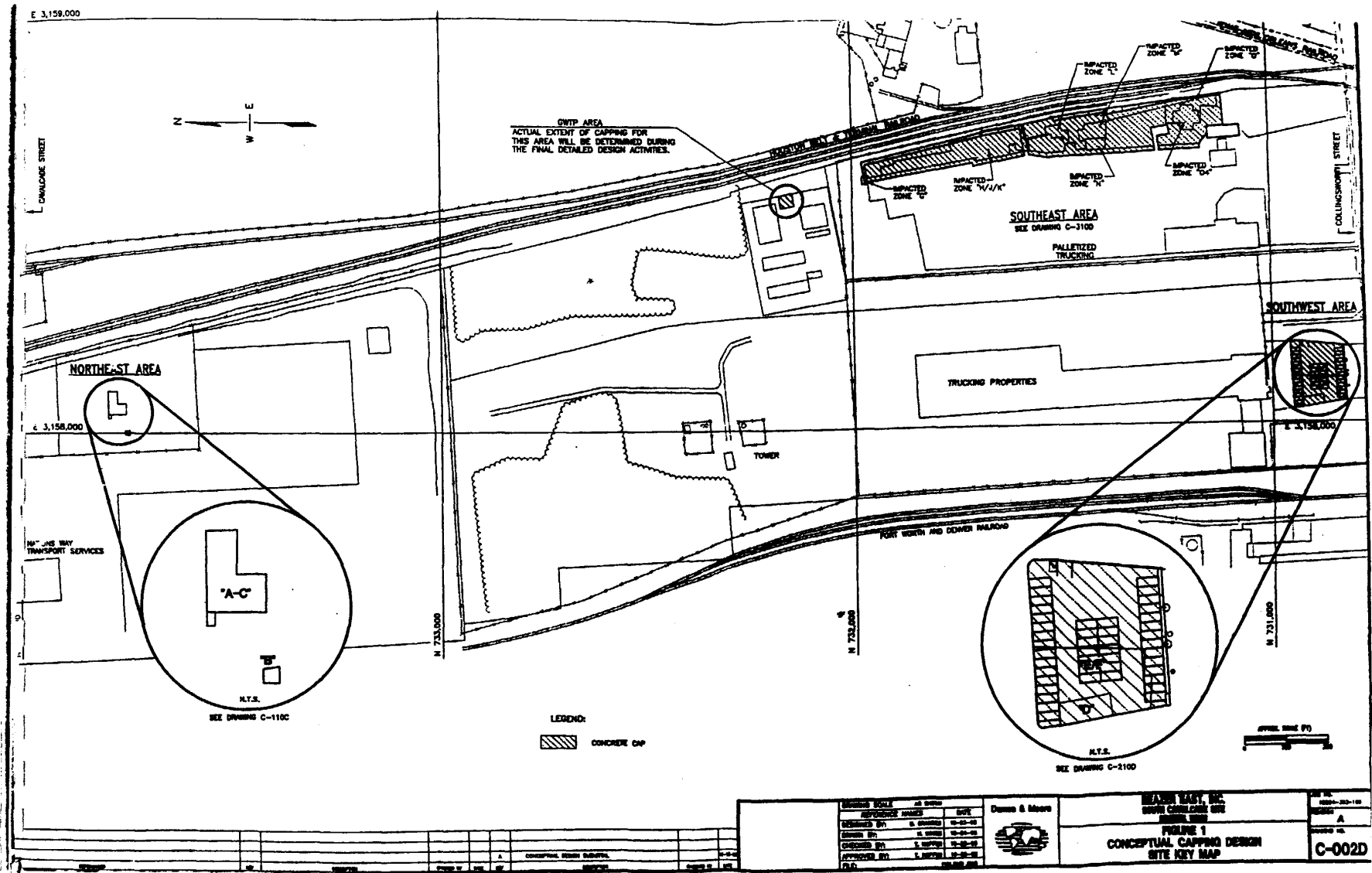
The following discussion presents the concrete cover conceptual design for each of the four Site areas described above.

## 2.1 SOUTHEAST AREA

The Southeast Area is a narrow strip of land located on the east side of Palletized Trucking, Inc. (Palletized) property. There are six impacted soil zones in this area which cover a total area of approximately 35,500 square feet.

The existing surface of the Southeast Area consists of an assortment of materials, but is predominantly covered with crushed concrete. Material excavated during Confirmational Sampling Plan (CSP) activities was backfilled with no mechanical compaction and presently exists in a loose state, while material not disturbed by CSP activities remains in a well compacted state.

The Southeast Area is relatively flat with slightly higher elevations located approximately in the middle of this narrow area. This high point divides the Southeast Area into northern and southern drainage areas. Both areas have a general easterly slope; therefore, runoff from these areas flows to the HB&T Railway ditch located to the east of the Site. In addition to its own surface runoff, the northern drainage area includes surface runoff from the easterly sloping existing concrete located to the west of this area.



012911

### **2.1.1 Concrete Cover Configuration**

The concrete cap for the Southeast Area will cover the majority of the narrow strip of land on the east side of Palletized property, which will provide a suitable tarmac for truck use. The general layout for the concrete cover is shown in Figure 2. Additional details for the Southeast Area concrete cover are shown in Figures 3 and 4. The following text describes how the concrete cover configuration shown in Figures 2, 3, and 4 satisfies the design criteria described above in Section 2.0.

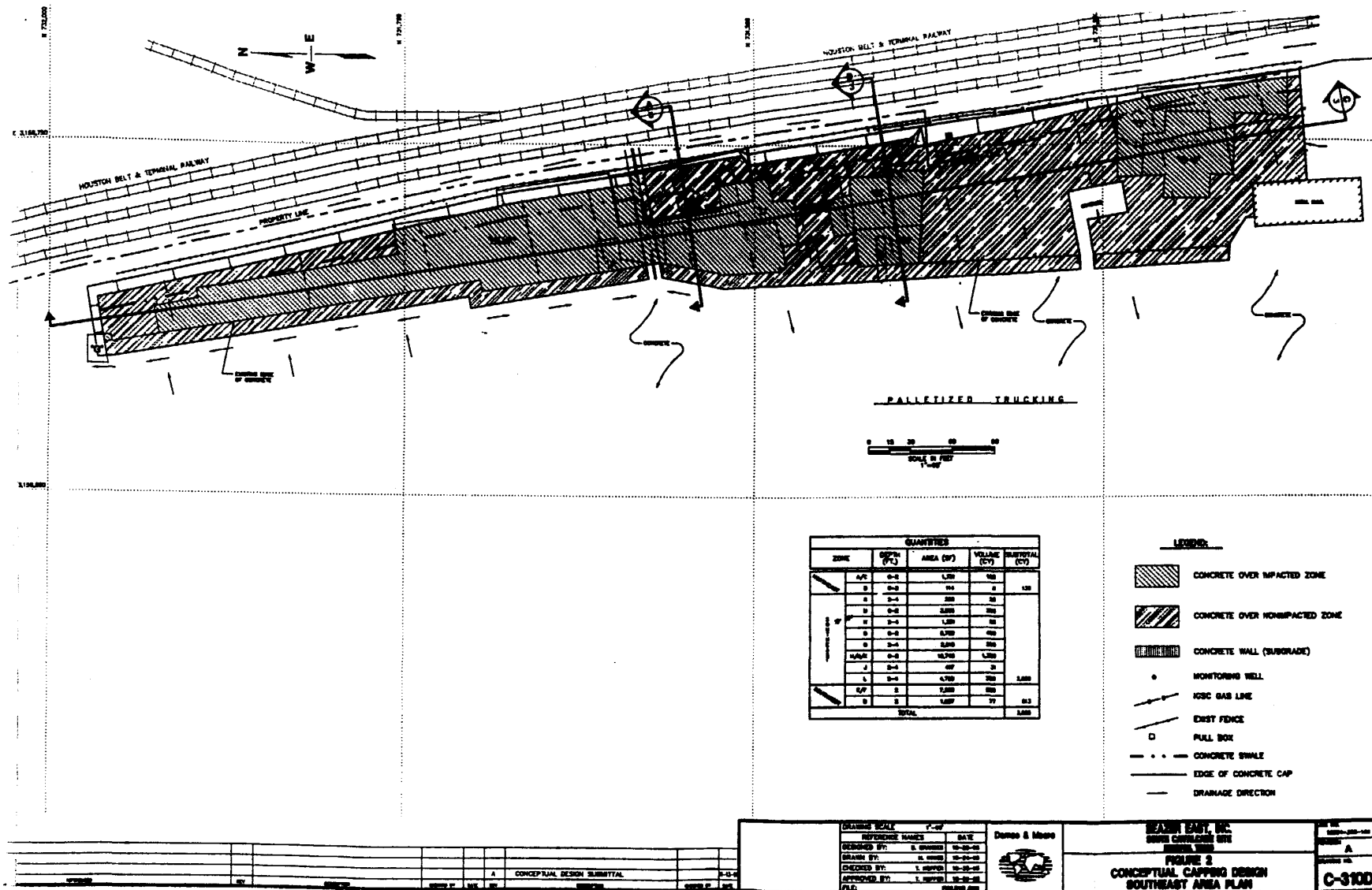
- **Cover the Impacted Zones**
  - To provide Palletized with a continuous pavement for operations the concrete cap will be constructed over both impacted and nonimpacted zones.
- **Provide a Useable Concrete Cover**
  - The slope of the concrete tarmac will be minimal to enable trailers to be parked.
  - Abrupt changes in grades will be avoided. Grade transitions will be achieved by utilizing ramps as shown in Figure 5.
  - The concrete cap will be wide enough along the entire length to accommodate Palletized's trailer sizes of 40 and 48 feet lengths.
- **Minimize Impacted Soil Excavation**
  - Cross-Section A as shown in Figure 3 is a typical cut section. Impacted excavation from this area will be placed as fill material over other impacted zones. Cross-Section A is typical of approximately 20 percent of the Southeast Area.
  - Cross-Section B as shown in Figure 3 is a typical fill section. Excavation of impacted or nonimpacted material is expected not to be required in the fill sections. Cross-Section B is typical of approximately 80 percent of the Southeast Area.
  - Cross-Section C as shown in Figure 3 is cut through all the Southeast impacted zones. Inspection of this cross-section reveals the volume of fill within the impacted zones is greater than the expected volume of impacted excavation.

Fill Required Over Impacted Zones . . . . .	510 cubic yards
Cut Required Over Impacted Zones . . . . .	93 cubic yards
<b>Balance . . . . .</b>	<b>417 cubic yards of fill</b>

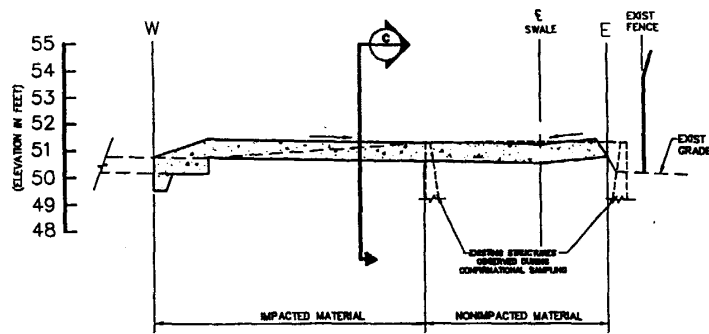
Fill Required Over Nonimpacted Zones . . . . .	680 cubic yards
Cut required Over Nonimpacted Zones . . . . .	170 cubic yards
<b>Balance . . . . .</b>	<b>510 cubic yards of fill</b>

The reported quantities are approximate and are subject to slight modifications during final design.

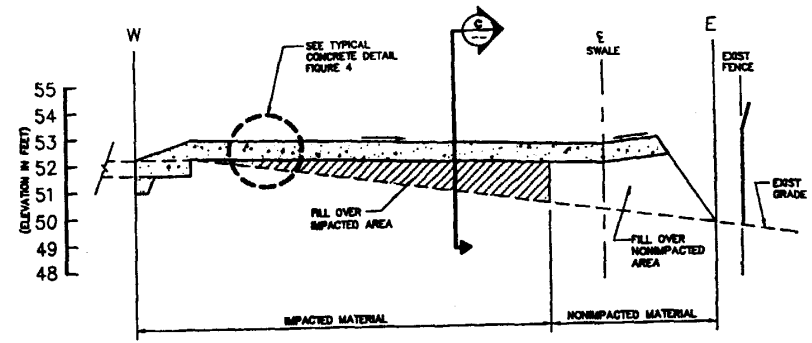
- The existing soil stockpiles located onsite will be used as fill material. These stockpiles have been tested following the methods contained in the EPA approved Stockpile Sampling Plan, included as part of Appendix A-1 of the Remedial Action Work Plan. Test results have demonstrated that these soil stockpiles do not contain potentially carcinogenic polynuclear aromatic hydrocarbons (pcPAHs) above the Record of Decision (ROD) goal of 700 ppm.
- The impacted soil excavated in the Northeast Area will be used as fill over the impacted zones of the Southeast Area.
- Provide Adequate Drainage
  - In the northern drainage area runoff from the existing westerly concrete pavement will be intercepted at the constructed ramp and directed to the north end of the cap or to a drainage swale formed into the cap as shown on Figure 2 and Cross-section C of Figure 3.
  - In the northern drainage area the concrete cap will have a cross drainage slope to the east which will flow into a swale formed into the cap as shown on Cross-section A and B of Figure 3. The runoff from the northern end of the cap will be directed to an unpaved area in the northeast corner of Palletized and ultimately routed to the existing HB&T Railway ditch.
  - In the southern drainage area the concrete cap will have a cross drainage slope to the east which will flow into a swale formed into the cap as shown on Cross-section A and B of Figure 3. The runoff from the southern end of the cap will



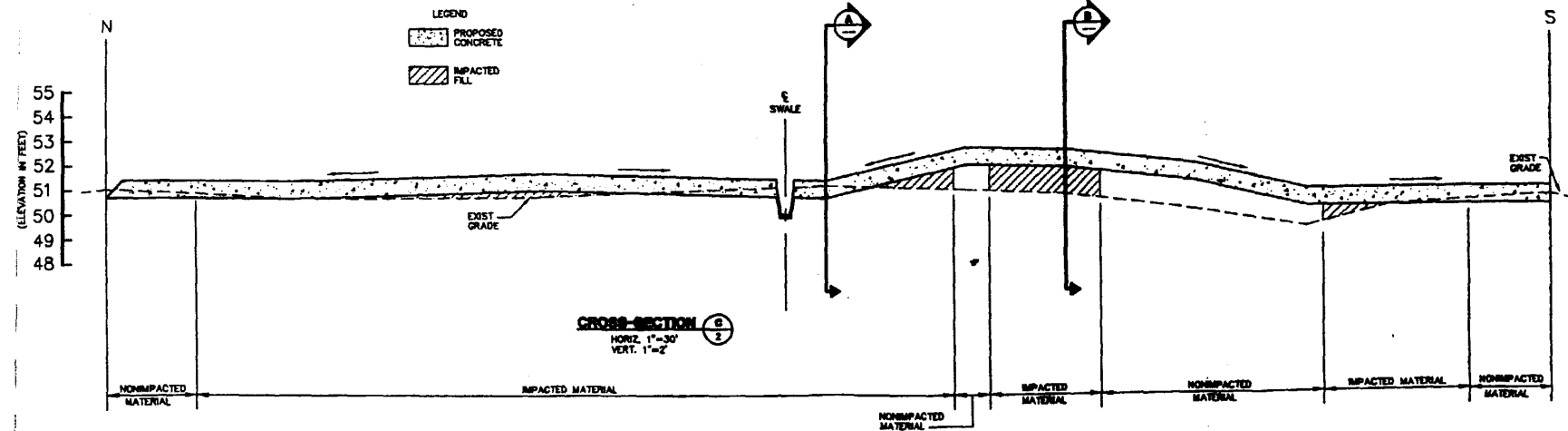
012914



**CROSS-SECTION A**  
 HORIZ. 1"=10'  
 VERT. 1"=2'



**CROSS-SECTION B**  
 HORIZ. 1"=10'  
 VERT. 1"=2'



**CROSS-SECTION C**  
 HORIZ. 1"=30'  
 VERT. 1"=2'

**LEGEND**  
 [Pattern] PROPOSED CONCRETE  
 [Pattern] IMPACTED FILL

DRAWING SCALE: 1"=10' DATE: 12-22-93 DESIGNED BY: A. BROWN CHECKED BY: L. BROWN APPROVED BY: L. BROWN		DAWSON & MERRILL 	<b>DAWSON &amp; MERRILL, INC.</b> 10000-200-100 FIGURE 3 <b>CONCEPTUAL CAPPING DESIGN</b> <b>SOUTHEAST AREA CROSS-SECTIONS</b> <b>C-310E</b>
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012915

be directed to an existing catch basin located approximately 220 feet south of the cap in the southeast corner of Palletized.

### **2.1.2 Concrete Cover Maintenance**

Due to the nature of properly designed and constructed concrete pavements maintenance for the proposed cap will be limited. By designing properly spaced expansion joints in the concrete cap cracking of the cap will be controlled at the joints. Expected minimum joint spacing is 15 to 25 feet. The expansion joints will be designed to be liquid tight to minimize infiltration of storm water.

## **2.2 SOUTHWEST AREA**

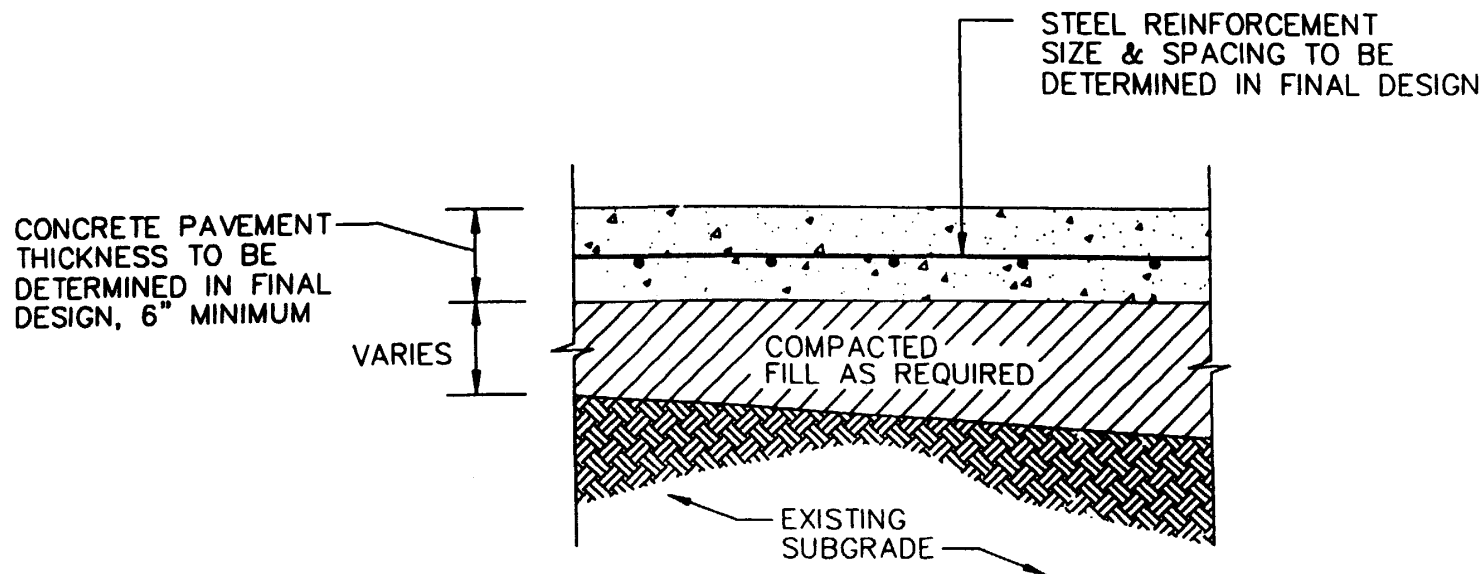
The Southwest Area is a relatively square piece of land located at the south entrance of Trucking Properties, Inc. (TPI) property. There are two impacted soil zones in this area which cover a total area of approximately 8,300 square feet.

The existing surface of the Southwest Area consists of grass. Material excavated during Confirmational Sampling Plan (CSP) activities was backfilled with no mechanical compaction and presently exists in a loose state, while material not disturbed by CSP activities remains in a well compacted state.

The Southwest Area is relatively flat with a slight crown in the middle on a north and south axis. Drainage in this area is to the east and west away from the slight crown described above.

### **2.2.1 Concrete Cover Configuration**

The concrete cap for the Southwest Area will cover approximately 60 percent of the square piece of land located at the south entrance of TPI property. The concrete cap will function as suitable space for future employee parking. The general layout of the concrete cap is shown in Figure 6. Additional details for the Southwest Area concrete cover are shown in Figure 7. The following text describes how the concrete cover configuration shown in Figures 6 and 7 satisfies the design criteria described above in Section 2.0.



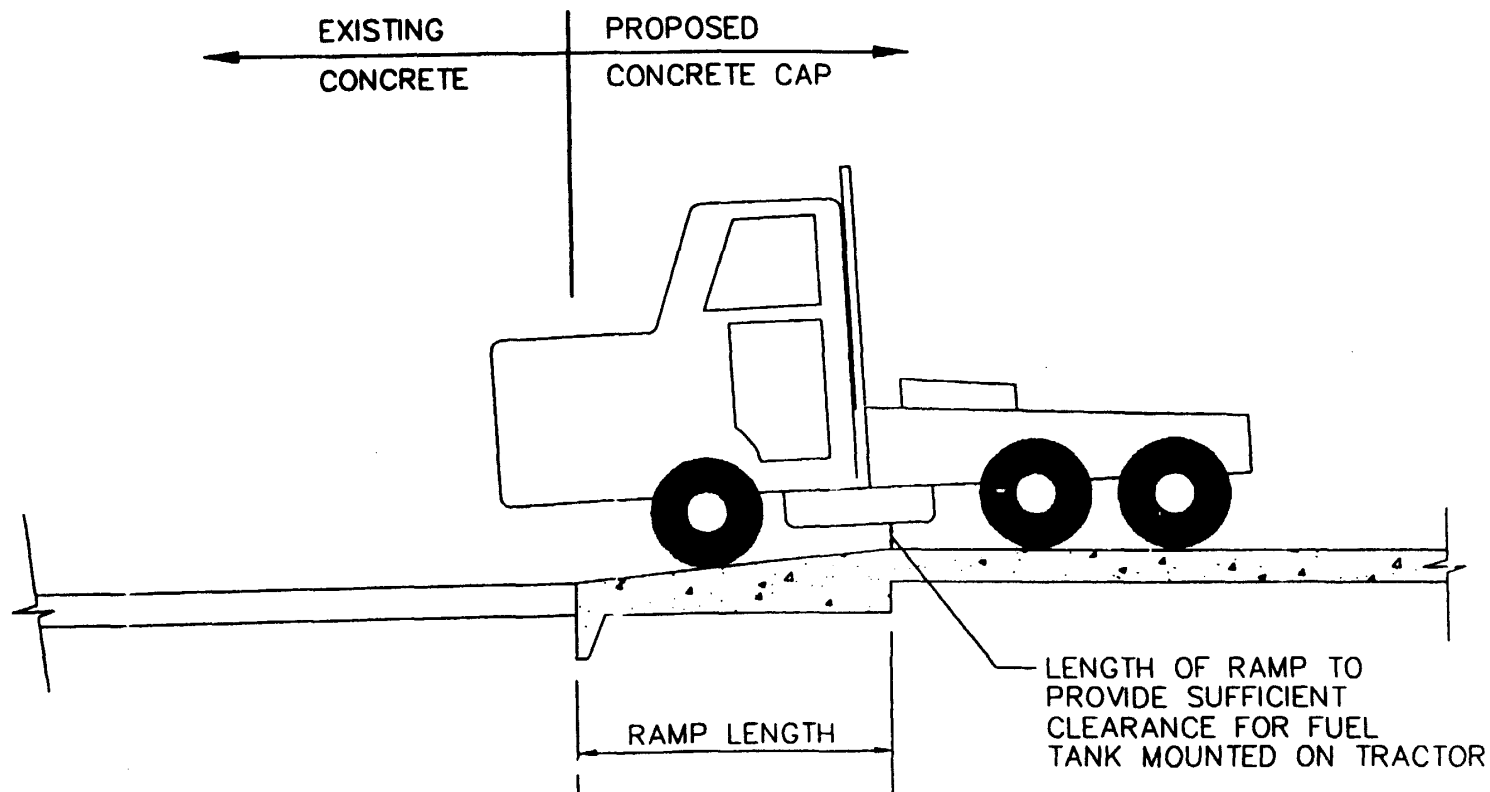
## TYPICAL CONCRETE DETAIL

NOT TO SCALE

**FIGURE 4**  
**CONCEPTUAL CAPPING DESIGN**  
**TYPICAL CONCRETE DETAIL**

FOR  
BEAZER EAST, INC.  
SOUTH CAVALCADE SITE  
HOUSTON, TEXAS

012917

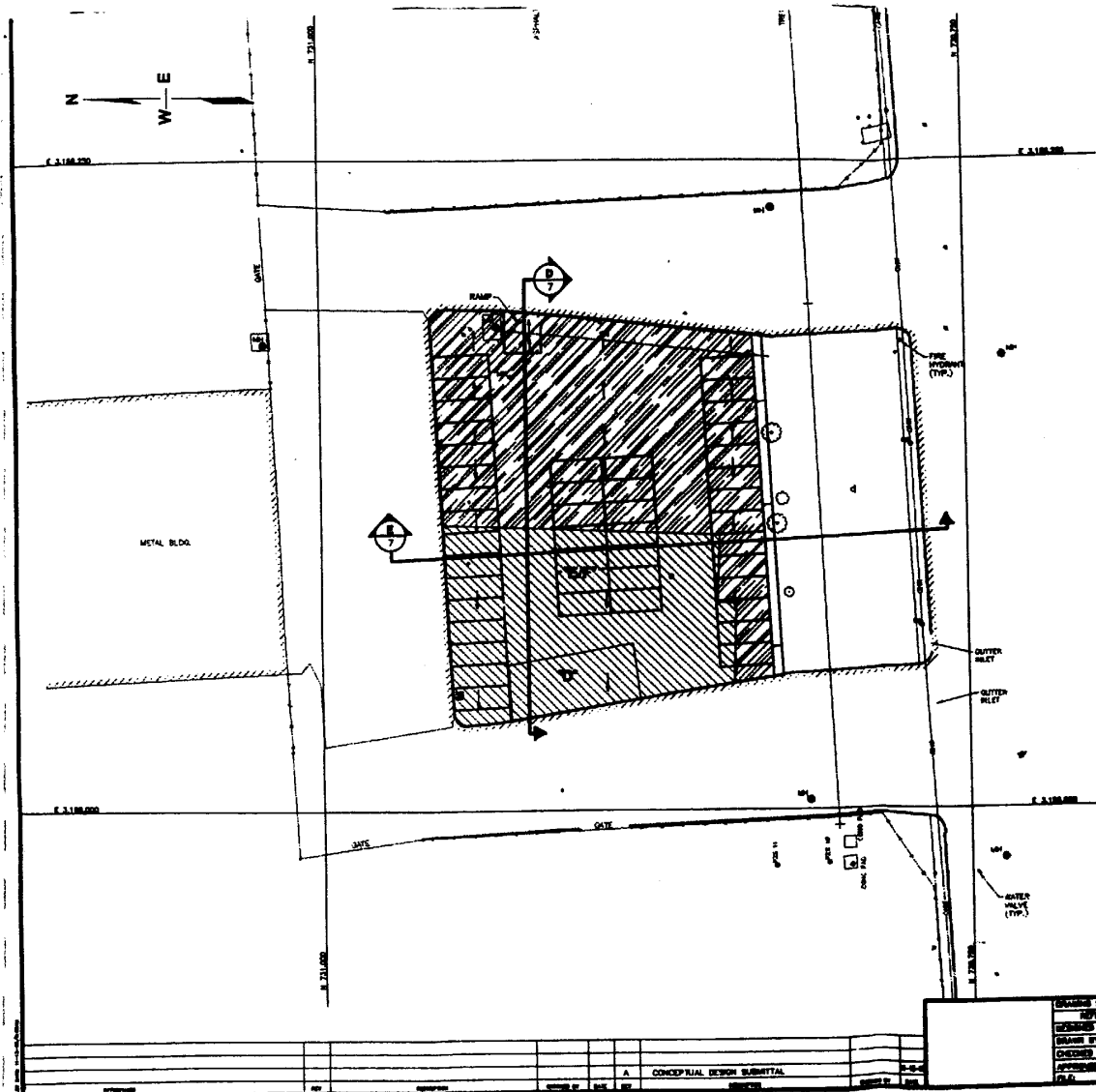


**FIGURE 5**  
**CONCEPTUAL CAPPING DESIGN**  
**SOUTHEAST RAMP CLEARANCE**

FOR  
BEAZER EAST, INC.  
SOUTH CAVALCADE SITE  
HOUSTON, TEXAS





NOT TO SCALE

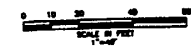
012918




QUANTITIES				
ZONE	DEPTH (FT.)	AREA (SF)	VOLUME (CY)	SUBTOTAL (CY)
IMPACTED ZONE	A/C 0-2	1,721	128	128
	B 0-2	114	8	
	C 2-4	268	20	
	M 0-2	3,868	268	
	N 2-4	1,281	93	
	O 0-2	6,728	488	
	Q 2-4	2,810	208	
	H/A/N 0-2	16,748	1,288	
	J 2-4	417	31	
	L 2-4	4,728	350	
NONIMPACTED ZONE	K/P 2	7,523	538	813
	D 2	1,857	77	
TOTAL				3,608

LEGEND:

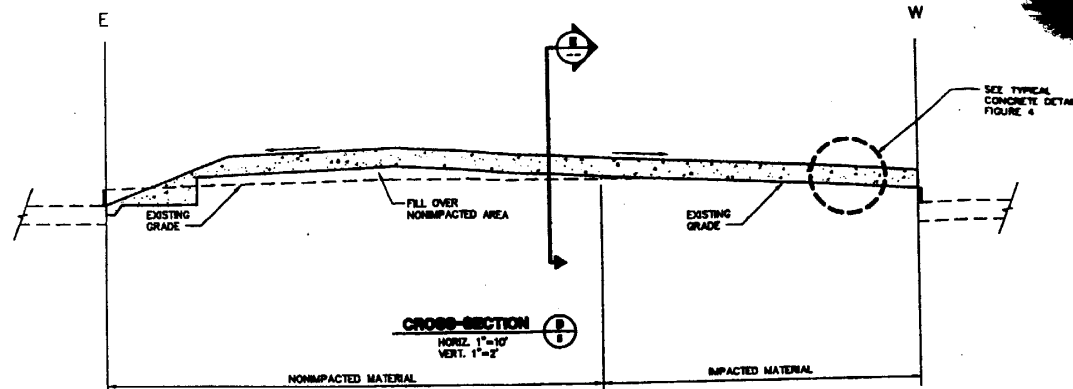
-  CONCRETE OVER IMPACTED ZONE
-  CONCRETE OVER NONIMPACTED ZONE
-  EDGE OF CONCRETE CAP
-  DRAINAGE DIRECTION



DRAWING SCALE: 1"=40' REVISIONS:		DATE: 10-20-00 DRAWN BY: J. J. JONES CHECKED BY: L. J. JONES APPROVED BY: L. J. JONES		DESIGN & MAPS 		BEASLEY & ASSOCIATES, INC. 10000 N. 10th Ave. Suite 100 Phoenix, AZ 85020 PHONE 6 CONCEPTUAL CAPTURE DESIGN SOUTHWEST AREA PLAN		C-2101	
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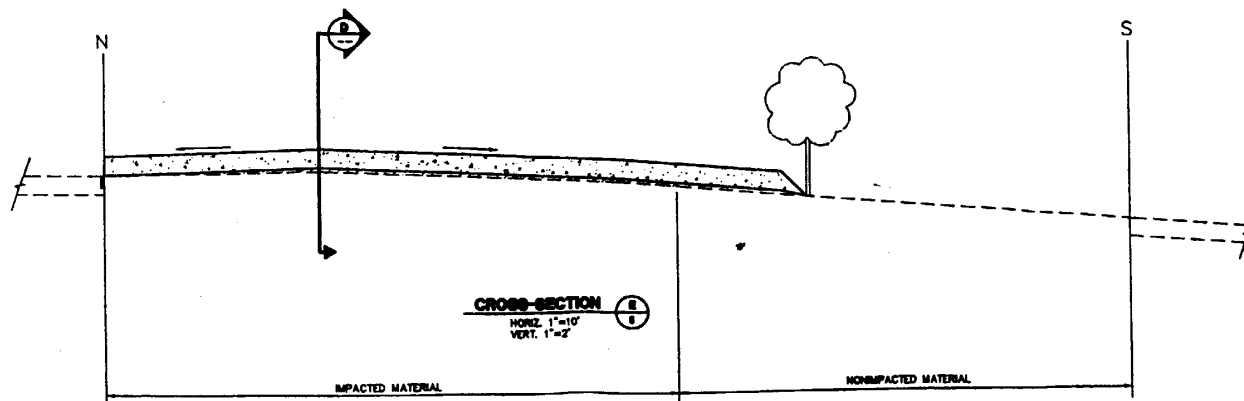
012919

(ELEVATION IN FEET)  
55  
54  
53  
52  
51  
50  
49  
48



LEGEND  
 PROPOSED CONCRETE  
 FILL OVER IMPACTED AREA

(ELEVATION IN FEET)  
55  
54  
53  
52  
51  
50  
49  
48



DRAWING SCALE: AS SHOWN		DATE: 12-22-93	 <b>FIGURE 7</b> <b>CONCEPTUAL CAPROD DESIGN</b> <b>SOUTHWEST AREA CROSS-SECTIONS</b>	SHEET NO. 1 TOTAL SHEETS 1
DESIGNED BY: S. GARDNER	DATE: 12-22-93	PROJECT NO. A DRAWING NO. C-210E		
CHECKED BY: L. GARDNER	DATE: 12-22-93			
APPROVED BY: L. GARDNER	DATE: 12-22-93			

012920

The reported quantities are approximate and are subject to slight modifications during final design.

- The existing soil stockpiles located onsite will be used as fill material. These stockpiles have been tested following the methods contained in the EPA approved Stockpile Sampling Plan, included as part of Appendix A-1 of the Remedial Action Work Plan. Test results have demonstrated that these soil stockpiles do not contain potentially carcinogenic polynuclear aromatic hydrocarbons (pcPAHs) above the ROD goal of 700 ppm.
- Provide Adequate Drainage
  - To promote drainage away from the cap in the Southwest Area the cap will be constructed at a slightly higher grade but at a slope similar to the existing grade. A crown will be formed near the middle of the area and the cap will be sloped towards the existing curb whereupon surface runoff will discharge to the existing paved areas surrounding the Southwest Area.

### 2.2.2 Concrete Cover Maintenance

Maintenance for the concrete cap in the Southwest Area will be similar to that described for the Southeast Area.

## **2.3 NORTHEAST AREA**

The Northeast Area is a relatively square piece of land located north of the maintenance shop on the eastern side of Nations Way Transport Service, Inc. (Nations Way) property. There are two impacted soil zones in this area which cover a total of approximately 1,845 square feet. These two impacted zones result in an in-place volume of approximately 140 cubic yards. Due to Nation Way's expressed interest to expand their trucking operations, and the relatively small impacted area and associated soil volumes in the Northeast Area, Beazer believes the most appropriate remedial action for this area is to excavate this material and backfill the excavation with clean fill. The in place volume of 140 cubic yards of excavated impacted material from the Northeast Area would be used as fill over impacted zones in the Southeast Areas. This will allow for final remediation of this area without introducing a small concrete cover which may eventually need to be incorporated into a larger paved area.

## **2.4 GROUNDWATER TREATMENT PLANT AREA**

The undefined impacted area located on the north and east side of the GWTP, as shown on Figure 1, will be capped consistent with the type of concrete cover proposed for the Southeast and Southwest areas. During implementation of the detailed design the extent of this area will be defined, in part, using existing analytical soil data which was previously collected.

## **3.0 DETAILED DESIGN**

### **3.1 ISSUES TO BE RESOLVED**

As described in Section 2.0 above there are four design constraints to be addressed as part of the final design. These design constraints are: cover the impacted zones, provide a useable concrete cover, minimize impacted soil excavation, and provide adequate drainage. Issues which must be resolved to complete the final design include:

- Obtain approval from the EPA of this Conceptual Design Report.
- Confirm the proposed ramps in the Southeast and Southwest are suitable for use with the expected vehicles.
- Assess the existing moisture content and density characteristics of the subgrade materials in both the impacted and nonimpacted zones without performing an extensive intrusive geotechnical investigation.
- Develop methods to densify the in-place materials sufficiently to support the intended dead and live loads with minimal disturbance of the subgrade.
- Develop payement design parameters such as a California Bearing Ratio (CBR) or a modulus of subgrade reaction (k) for the supporting subgrade.
- Determine the thickness, maintaining a minimum thickness of six inches, and reinforcement requirements for the concrete cap.

**APPENDIX A**  
**COST ESTIMATES**

PROCESSED BY THE FBI

Dames & Moore, Inc.  
 Job No. 18804-303-186  
 Beazer South Cavalcade Site  
 Concrete Paving Cost Estimate  
 By: MF/BDB Date: 11/16/95

PAVING QUANTITIES

012924

Item	Activity Description	Unit	Quantity	Unit Cost	Total \$
<b><u>SOUTHEAST</u></b>					
1	Demolish & Remove Surficial Concrete 1' thick	CY	344	\$154.48	\$53,145
2	Haul Surficial Concrete	LOADS	44	\$700.00	\$30,800
3	Disposal of Surficial Concrete as Non-Haz	TONS	874	\$86.00	\$75,164
4	Raise Vault Lids	EA	2	\$800.00	\$1,600
5	Excavate Clean Material	CY	169	\$4.50	\$761
6	Excavate Impacted Material	CY	93	\$5.50	\$512
7	Backfill With Stockpile and Imported Material	CY	791	\$3.50	\$2,769
8	Obtain Backfill from offsite (1-1/2" Limestone)	CY	364	\$4.26	\$1,551
9	Backfill Impacted Material	CY	229	\$5.50	\$1,260
10	Proofroll Area	SY	6,848	\$1.20	\$8,218
11	Dynamic Compaction	SY	1,053	\$3.11	\$3,275
12	Grade	SY	7,500	\$1.66	\$12,675
13	6" Concrete with #4 Reinforcements	SY	7,711	\$26.38	\$203,425
14	Concrete Wall 8" thick 6' tall	CY	39	\$124.53	\$4,797
<b>SOUTHEAST AREA SUBTOTAL</b>					<b>\$388,545</b>
<b><u>SOUTHWEST</u></b>					
1	Clear & Grub: 4" maximum	SY	1,751	\$1.25	\$2,189
2	Haul Cleared Material from over Impacted Area	LOADS	8	\$700.00	\$5,600
3	Disposal of Cleared Material from over Impacted Area As Hazardous Material	TONS	151	\$165.00	\$24,915
4	Backfill Clean Material	CY	115	\$3.50	\$403
5	Obtain Backfill from offsite (1-1/2" Limestone)	CY	115	\$4.26	\$489

Dames & Moore, Inc.  
 Job No. 18804-303-186  
 Beazer South Cavalcade Site  
 Concrete Paving Cost Estimate  
 By: MF/BDB Date: 11/16/95

PAVING QUANTITIES

Item	Activity Description	Unit	Quantity	Unit Cost	Total \$
6	Proofroll Area	SY	1,751	\$1.20	\$2,101
7	Dynamic Compaction	SY	804	\$3.11	\$2,500
8	Grade	SY	1,751	\$1.69	\$2,958
9	6" Concrete with #4 Reinforcements	SY	1,751	\$26.36	\$46,191
<b>SOUTHWEST AREA SUBTOTAL</b>					<b>\$87,348</b>
<b><u>NORTHEAST</u></b>					
1	Excavate Impacted Material	CY	136	\$5.50	\$748
2	Backfill Area	CY	136	\$3.50	\$476
3	Obtain Backfill (Offsite Select Fill)	CY	136	\$6.86	\$933
<b>NORTHEAST AREA SUBTOTAL</b>					<b>\$2,157</b>
<b><u>SWTP AREA SUBTOTAL</u></b>					
1	Proofroll Area	SY	278	\$1.20	\$334
2	Grade Area	SY	278	\$1.69	\$470
3	6" Concrete with #4 Reinforcements	SY	278	\$26.36	\$7,328
<b>SWTP AREA SUBTOTAL</b>					<b>\$8,131</b>
<b><u>GENERAL CONSTRUCTION COSTS (ALL AREAS)</u></b>					
1	Mobilization/Demobilization	LS	1	\$4,000.00	\$4,000
2	Obtain Permit for City Parking Lot All Areas	LS	1	\$600.00	\$600
3	Construction Oversight	Days	45	\$750.00	\$33,750
4	Surveying	LS	1	\$2,000.00	\$2,000

012925

Dames & Moore, Inc.  
 Job No. 18804-303-186  
 Bexar South Cavalcade Site  
 Concrete Paving Cost Estimate  
 By: MF/BDG Date: 11/16/98

**PAVING QUANTITIES**

Item	Activity Description	Unit	Quantity	Unit Cost	Total \$
5	Remedial Design	LS	1	\$19,500.00	\$19,500
6	As-built Drawings	LS	1	\$7,500.00	\$7,500
<b>GENERAL CONSTRUCTION SUBTOTAL</b>					<b>\$27,000</b>
<b>PROJECT SUBTOTAL:</b>					<b>\$27,000</b>
<b>25% Contingency</b>					<b>\$6,750</b>
<b>TOTAL COST:</b>					<b>\$33,750</b>

012926

Dames & Moore, Inc.  
 Job No. 18804-303-186  
 Beazer South Cavalcade Site  
 Northeast BioCells Cost Estimate  
 By: BDB Date: 10/24/95

**BIOCELL QUANTITIES**

Item	Activity Description	Unit	Quantity	Unit Cost	Total \$
<b><u>BIO PLOT CONSTRUCTION</u></b>					
1	Clear and Grub Area - including trees	SY	5,556	\$1.25	\$6,945
2	Grade Area	SY	5,556	\$0.42	\$2,365
3	Berm Construction - 2 feet high Imported Clay	CY	572	\$10.84	\$6,081
4	Sand - 6" minimum beneath HDPE liner	CY	614	\$6.87	\$4,218
5	HDPE Liner 30 mil	SF	49,388	\$0.70	\$34,572
6	12" Pea Gravel (<3/4" diameter)	CY	1,229	\$31.27	\$38,433
7	Geotextile Material	SY	3,733	\$3.27	\$12,207
8	Excavate Impacted Material	CY	3,582	\$5.50	\$19,701
9	Impacted Material Preparation (85%)	CY	3,045	\$17.38	\$52,907
10	Impacted Soil Amendments ( pine bark, urea)	CY	3,045	\$15.00	\$45,675
11	Handle, Sample and Dispose of over 1" Debris (12%) as Non-Hazardous	TONS	750	\$86.00	\$64,474
12	Transportation of Disposed Non-Haz Material	LOADS	38	\$700.00	\$37,080
13	Handle, Sample and Dispose of over 1" Debris (3%) as Hazardous	TONS	191	\$165.00	\$31,445
14	Transportation of Disposed Hazardous Material	LOADS	10	\$700.00	\$6,985
15	Backfill Impacted Material into BioCell	CY	7,880	\$4.10	\$31,385
16	1" Water Drip Lines HDPE	LF	3,520	\$0.70	\$2,464
17	1" VBF-1 Valves	EA	44	\$20.00	\$880
18	1-1/2" PVC Water Line Header w/ bands	LF	25	\$8.00	\$200
19	Lateral "D" 3" Air Inlet Pipe with sock	LF	3,380	\$0.80	\$1,880
20	2" VBF-1 Valves	EA	42	\$36.00	\$1,470
21	6" Header "E" HDPE Pipe with connections	LF	420	\$2.50	\$1,050
22	3" Lateral "A" Air Discharge HDPE Pipe	LF	3,380	\$0.30	\$1,008

012927

Dames & Moore, Inc.  
 Job No. 18804-303-188  
 Beazer South Cavalcade Site  
 Northeast BioCells Cost Estimate  
 By: BDB Date: 10/24/96

**BIOCELL QUANTITIES**

012928

Item	Activity Description	Unit	Quantity	Unit Cost	Total \$
23	6" Header "B" HDPE Pipe with connections	LF	420	\$2.50	\$1,050
24	8" Blower Suction "C" PVC Pipe with 2 90 bends	LF	50	\$4.00	\$200
25	3/8" Stainless Steel Tubing (ammonia)	LF	210	\$7.19	\$1,510
26	1/2" Copper Tubing (water line) FIELD ROUTED	LF	210	\$3.77	\$792
27	Misc. Fittings, Bolts, Couplings, & Valves, Inlet "F"	LS	1	\$5,000.00	\$5,000
28	8" Butterfly Valve	EA	1	\$350.00	\$350
29	Miscellaneous Instruments	LS	1	\$10,000.00	\$10,000
30	Pipe Stand Concrete 3000 psi/28 day & Steel Beams	EA	42	\$200.00	\$8,400
31	Piping Installation - 20 days labor : 3 man crew	DAYS	20	\$1,050.00	\$21,000
32	Piping Insulation - Water Mains	LS	1	\$5,000.00	\$5,000
33	Hypalon Cover (glue seams & anchor w/ sandbags)	SY	5,052	\$10.00	\$50,516
34	Additional Trenching to Northeast Location	LF	500	\$25.00	\$12,500
35	Rental of On. FracTank	DAY	90	\$30.00	\$2,700
36	Sampling Surplus Trench Material	EA	1	\$300.00	\$300
37	As-Built Drawings	LS	1	\$7,500.00	\$7,500
<b>BIOLOT CONSTRUCTION SUBTOTAL</b>					<b>\$632,063</b>
<b>BIOKID PACKAGE &amp; FOUNDATION</b>					
1	Blockid 6" Reinforced Concrete Foundation Concrete Foundation Will Extend 3' Beyond Skid.	SY	117	\$18.95	\$2,211
2	6" Limestone Compacted to 90% Modified Proctor for Blockid foundation subbase	SY	117	\$4.28	\$497
3	6" Limestone Compacted to 90% Modified Proctor for Carbon Adsorbent Foundation 2 @ 10'x20'	SY	100	\$4.28	\$428
4	2 Metal Buildings	LS	1	\$15,000.00	\$15,000
5	2 Fences @ 28'x22' each	LF	182	\$10.00	\$1,820

Dames & Moore, Inc.  
 Job No. 18884-303-186  
 Besser South Cavalcade Site  
 Northeast BioCells Cost Estimate  
 By: BDS Date: 10/24/86

**BIOCELL QUANTITIES**

012929

Item	Activity Description	Unit	Quantity	Unit Cost	Total \$
6	Blower Stid Package (SPATCO)	EA	2	\$70,000.00	\$140,000
7	Blower Stid Installation	EA	2	\$1,500.00	\$3,000
<b>BLOWER SUBTOTAL</b>					<b>\$143,000</b>
<b>OPERATION &amp; MAINTENANCE</b>					
1	Manpower to operate biocell (Part-Time: 33%) 13 hours per week @ \$40.00/hour for 52 weeks for 5 years	5 YRS	1	\$110,889.00	\$110,889
2	Miscellaneous materials, supplies, rental equipment and maintenance for biocell for 5 years	5 YRS	1	\$117,922.00	\$117,922
3	Power (electricity) for 5 years  Sampling (96 samples/biocell/year) for 5 years	5 YRS	1	\$131,208.00	\$131,208
4	Validation (64 hours/year)	5 YRS	1	\$32,802.00	\$32,802
5	Sampling Labor (192 hours/year @ \$72.00)	5 YRS	1	\$56,681.00	\$56,681
6	Lab Costs - (\$300/sample+\$400/quarter-organics)	5 YRS	1	\$242,732.00	\$242,732
7	Four Quarterly Reports for Sampling per year	5 YRS	1	\$123,008.00	\$123,008
8	Miscellaneous Supplies for 5 years  One Time Initial Sampling Fee (no validation)	5 YRS	1	\$8,200.00	\$8,200
9	Sample Lab Costs	SAM	20	\$100.00	\$2,000
10	Sampling Labor	HR	10	\$72.00	\$720
11	Miscellaneous Supplies	LS	1	\$800.00	\$800
<b>OPERATION &amp; MAINTENANCE SUBTOTAL:</b>					<b>\$828,836</b>
<b>BIOCELL DECOMMISSIONING</b>					
1	Clear And Grub Area - 3.8 additional acres	SY	18,888	\$1.25	\$23,610
2	Grade Area - 4.86 acres	SY	23,474	\$1.08	\$25,351
3	Precontrol Area - 4.86 acres	SY	23,474	\$1.20	\$28,169

Dames & Moore, Inc.  
 Job No. 18804-303-186  
 Besser South Cavalcade Site  
 Northeast BioCells Cost Estimate  
 By: BDB Date: 10/24/85

012930

**BIOCELL QUANTITIES**

Item	Activity Description	Unit	Quantity	Unit Cost	Total \$
4	Geotextile Material (3733 SY already in place)	SY	19,741	\$3.27	\$64,553
5	6" Limestone Compacted to 90% Modified Proctor	SY	23,474	\$4.26	\$99,999
6	Biocell Above Grade Piping Breakdown 3 man crew - 5 day labor	DAY	5	\$1,050.00	\$5,250
7	Dispose of Hypalon Liner as Hazardous Material 0.24\$/SF for 36 mil Hypalon Liner	TONS	5	\$185.00	\$899
8	Disposal of Above Ground Biocell Piping as Hazardous	TONS	35	\$185.00	\$5,775
9	Transportation of Hazardous Disposal Materials	LOADS	2	\$700.00	\$1,400
<b>BIOCELL DECOMMISSIONING SUBTOTAL</b>					<b>\$252,000</b>
<b>GENERAL CONSTRUCTION COSTS</b>					
1	Mobilization	LS	1	\$10,000.00	\$10,000
2	Construction Management and Oversight	DAYS	60	\$750.00	\$54,000
3	Survey	LS	1	\$2,000.00	\$2,000
<b>GENERAL CONSTRUCTION SUBTOTAL</b>					<b>\$66,000</b>
<b>PROJECT SUBTOTAL:</b>					<b>\$1,538,754</b>
<b>25% Contingency</b>					<b>\$409,216</b>
<b>TOTAL COST:</b>					<b>\$2,558,650</b>

**Notes:** Required Volume 7210 CY over two biocells  
 Biocell Dimensions: 2 biocells @ 210' X 80' X 7'

**Note:** This estimate does not include or stormwater treatment during construction.

**Assumption:** Use of two biocell packages placed west of each  
 each biocell, centered along the length.

**Assumption:** Soil Processing Unit still in place. Utilities for contractor still in place.  
 Complete Re-Mobilization does not occur.

**Assumption:** O&M sampling costs were taken to present day value with n = 5 yrs and i = 7%

**Assumption:** Estimate Based on 3805 CY in place.

012931

**APPENDIX B**

**SOIL WASHING COST ESTIMATE**

PERFORMANCE INDICATOR

012932

Dames & Moore, Inc.  
 Job No. 18804-303-012  
 Besser South Cavalcade Site  
 Soil Washing with Incineration of Residuals Cost Estimate  
 By: BH/MS Date: December 1995

Item	Activity Description	Unit	Quantity	Unit Cost	Total \$
1	Remedial Design	LS	1	\$100,000.00	\$100,000
2	PA Planning	LS	1	\$30,000.00	\$30,000
3	Site Preparation	LS	1	\$50,000.00	\$50,000
4	Mobilization	LS	1	\$200,000.00	\$200,000
5	Excavate Impacted Material	TON	6,300	\$3.14	\$19,801
6	Screening	TON	6,300	\$35.00	\$220,500
7	Soil Washing Equipment	DAY	100	\$5,000.00	\$500,000
8	Soil Washing Labor	DAY	160	\$4,500.00	\$450,000
9	Soil Washing Materials	LS	1	\$253,500.00	\$253,500
10	Soil Amendments	TON	2,655	\$10.00	\$26,550
11	+2.5 Transportation and Disposal*	TON	445	\$1,000.00	\$445,000
12	+0.5" Transportation and Disposal*	TON	620	\$1,000.00	\$620,000
13	+10 Mesh Transportation and Disposal*	TON	570	\$1,000.00	\$570,000
14	Decanted Froth Liquid-Transportation & Recycle	GAL	62,200	\$1.50	\$93,300
15	Froth-Transportation & Disposal*	TON	1,250	\$1,000.00	\$1,250,000
16	High Total Suspended Solids Wash Water Disposal	GAL	240,000	\$0.50	\$120,000
17	Backfill Clean Material	TON	6,300	\$2.33	\$14,688
18	Demobilization	LS	1	\$150,000.00	\$150,000
19	PA Oversight	DAY	100	\$750.00	\$75,000
20	Site Closure	LS	1	\$15,000.00	\$15,000
21	Closure Report	LS	1	\$30,000.00	\$30,000
<b>PROJECT SUBTOTAL</b>					<b>\$6,436,349</b>
<b>25% Contingency</b>					<b>\$1,398,337</b>
<b>TOTAL COST</b>					<b>\$7,834,686</b>

Item 5: Impacted Excavation based on \$3.14/CY and 1.75 TON/CY

Item 16: Clean Backfill based on \$2.33/CY and 1.5 TON/CY

Item 9: Soil Washing Materials Unit Cost is based on Pilot Test Chemical Use Data

Item 17: High TSS Wash Water Disposal is based on 5 gpm blowdown, for 8 hrs/day, for 100 days.

Items 4, 7, 8, and 18: Mobilization, Soil Washing Equipment and Labor Costs, and Demobilization is based on Contractor Bid

Item 14: Quantity based on 600 tons of dry divided by the 1.75 ton/cy factor. This 400 dry CY is multiplied by 2 to account for water resulting in 800 CY of wet froth sludge. If 1/3 of this is decanted as water, then 300 CY of Decanted Froth Liquid must be disposed. 300 CY=48,000 gallons @ \$1.50/gallon.

Item 15: Following decanting of froth water as described in Item 14, 604 CY of wet froth sludge will remain. Multiplying by 2 ton/CY for wet material results in 1,208 tons.

\*Items 11-13 and 16: For budgetary cost estimating purposes, incineration is considered as the disposal alternative due to the potential applicability of Phase IV Land Disposal Restrictions and Universal Treatment Standards. However, designer reserves the right to seek alternative remedial measures for treatment of soil washing residuals, if necessary.

Dames & Moore, Inc.  
 Job No. 18804-303-012  
 Beazer South Cavalcade Site  
 Soil Washing: Product Residual Stream Summary  
 By: BH/MB Date: November 1995

Feed	6300	Feed
+6" Debris	315	Residual
-6", +2.5" Debris	130	Residual
-2.5", +0.5" Aggregate	820	Residual
-0.5", +10 Mesh Aggregate	570	Residual
Flotation Tailings	3650	Washed
Flotation Froth	820 dry, 1640 wet	Residual
Wash Water	NA	Residual

012934

**APPENDIX C - ADMINISTRATIVE ORDER ON CONSENT,  
DOCKET NUMBER CERCLA 6-08-92**

012935

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 6  
DALLAS, TEXAS

REGIONAL ADMINISTRATOR  
EPA REGION VI  
1992 JAN -8 PM 2:43

IN THE MATTER OF )

REX KING and MARILYN LEE KING, )  
PALLETIZED TRUCKING, INC., )  
BAPTIST FOUNDATION OF TEXAS, )  
MERCHANTS FAST MOTOR LINES, INC., )  
and TRUCKING PROPERTIES, INC., )

RESPONDENTS )

REGARDING THE )

SOUTH CAVALCADE STREET SUPERFUND )  
SITE )  
HOUSTON, HARRIS COUNTY, TEXAS )

DOCKET NUMBER  
CERCLA 6-08-92

ADMINISTRATIVE ORDER  
ON CONSENT

Proceeding Under the Authority of )  
Section 122(g)(4) of the )  
Comprehensive Environmental )  
Response, Compensation, and )  
Liability Act of 1980, as Amended, )  
42 U.S.C. § 9622(g)(4) )

**I. JURISDICTION**

1. This Administrative Order on Consent ("Consent Order") is issued and entered into pursuant to the authority vested in the President of the United States by Section 122(g)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 ("CERCLA"), Pub. L. No. 99-499, 42 U.S.C. 9622(g)(4), to reach settlements in actions under Section 106 or 107(a) of CERCLA, 42 U.S.C. 9606 or 9607(a) in matters involving de minimis parties. The authority vested in the President has been delegated to the Administrator of EPA by Executive Order 12580, 52 FR 2923 (Jan. 29, 1987) and further delegated to the Regional Administrators of the EPA by EPA Delegation No. 14-14-E (Sept. 13, 1987).

2. This Consent Order is issued to and entered into by Trucking Properties, Inc. (successor by change of corporate name to Merchants, Inc.), a corporation organized under the laws of the State of Delaware; Merchants Fast Motor Lines, Inc. ("Merchants Fast"), a corporation organized under the laws of the State of Delaware; Baptist Foundation of Texas, a non-profit corporation organized under the Texas Non-Profit Corporation Act; and Mr. Rex King, Mrs. Marilyn Lee King, and Palletized Trucking, Inc., a corporation organized under the laws of the State of Texas ("Respondents").

of this Consent Order involves only a minor portion of the response costs at the Site, and that, (b) with respect to the Respondents, the conditions set forth in CERCLA 122(g)(1)(A) are met.

16. Respondents represent, and for the purposes of this Consent Order EPA affirms and finds, that (a) Respondents' involvement with the Site is limited to purchasing all or a portion of the Site and operation or leasing for the operation of a trucking terminal at the site, (b) the amount of the hazardous substances contributed to the Site by the Respondents, if any, is minimal in comparison to other hazardous substances at the Site, and (c) the toxic or other hazardous effects of the substances contributed by the Respondents to the Site, if any, are minimal in comparison to other hazardous substances at the facility.

#### IV. DETERMINATIONS

Based upon the Statements of Fact set forth above and on the administrative record for this Site, EPA has determined that:

17. The Site as described in Section III of this Consent Order is a "facility" as that term is defined in Section 101(9) of CERCLA, 42 U.S.C. 9601(9).

18. Respondents are "persons" as that term is defined in Section 101(21) of CERCLA, 42 U.S.C. 9601(21).

19. Respondents are "owners" of a facility within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. 9607(a)(1), and are "potentially responsible parties" within the meaning of Section 122(g)(1) of CERCLA, 42 U.S.C. 9622(g)(1).

20. The past, present, or future migration of hazardous substances from the Site constitutes an actual or threatened "release" as that term is defined in Section 101(22) of CERCLA, 42 U.S.C. 9601(22).

21. Prompt settlement with the Respondents is practicable and in the public interest within the meaning of Section 122(g)(1) of CERCLA, 42 U.S.C. 9622(g)(1).

22. This Consent Order involves at most only a minor portion of the response costs incurred and to be incurred at the Site pursuant to Section 122(g)(1) of CERCLA, 42 U.S.C. 9622(g)(1).

23. Respondents are eligible for a de minimis settlement pursuant to section 122(g)(1)(A) of CERCLA, 42 U.S.C. 9622(g)(1)(A).

**V. ORDER**

24. Based upon the administrative record for this Site and the Statement of Facts and Determinations set forth above, and in consideration of the promises and covenants set forth herein, it is hereby AGREED TO AND ORDERED:

**VI. ACCESS AND NOTICE**

25. Respondents hereby grant to EPA, its employees, representatives, contractors, agents, and all other persons performing response actions under EPA's oversight, a right of access to the Site for the purposes of monitoring the terms of this Consent Order and performing response actions at the Site. Nothing herein shall limit EPA's right of access under applicable law.

26. Within 60 days of the effective date of this Consent Order, Respondents shall file in the land records of Harris County a notice, approved by EPA, to subsequent purchasers of the land, that hazardous substances were disposed of and will continue to remain in both the soils and ground water at the Site. This notice shall indicate that the development of the Site for residential use is inappropriate due to the continuing presence of hazardous substances at the site. This notice shall also include a copy of this Consent Order and the Consent Decree between EPA and Beazer East, Inc. In addition, within 10 days of filing of such notice, Respondents shall provide documentation to EPA verifying that they have filed the required notice pursuant to this paragraph.

27. Nothing in this Consent Order shall in any manner restrict or limit the nature or scope of response actions which may be taken by EPA in fulfilling its responsibilities under federal law. Respondents recognize that the implementation of response actions at the Site may interfere with the use of their property. EPA, its employees, representatives, contractors, agents, and all other persons performing response actions under EPA's oversight shall use their best efforts not to unreasonably interfere with the operations of the Respondents or their tenants by any such entry and actions, and will use their best efforts to give the Respondents reasonable notice prior to such entry. Respondents agree to cooperate with EPA in the implementation of response actions at the Site and further agree not to interfere with such response actions.

**VII. DUE CARE**

28. Nothing in this Consent Order shall be construed to relieve Respondents of their duty to exercise due care with respect to hazardous substances at the Site or their duty to comply with all applicable laws and regulations. Such due care shall include, but not be limited to (a) preventing the installation of water wells on the Site except for the purpose of conducting

investigation, remediation, or other activities authorized by EPA, (b) preservation, protection, repair, and maintenance of concrete foundations, parking areas, and other paved areas currently existing and under which hazardous substances remain, and (c) compliance with applicable laws and regulations applicable to the installation, maintenance, operation, or closure of existing underground storage tanks ("UST") on the site. Respondents shall provide notice to EPA concurrent with any required notice to the Texas Water Commission ("TWC") prior to closure of any UST on the site. EPA will provide notice of and an opportunity to cure any violation of subparagraph 28(b) provided that such violation is not caused by the Respondents. This opportunity to cure shall not exceed 10 days, and stipulated penalties shall start accruing on the eleventh (11th) day following the date of notice of violation if the violation continues.

#### **VIII. PAYMENT**

29. Respondents shall pay the sum of \$84,651.76 to the Hazardous Substance Response Trust Fund within 30 days of the effective date of this Consent Order.

30. The payment specified in Paragraph 29 shall be made by certified or cashier's check(s) payable to "EPA Hazardous Substance Superfund." Each check shall reference the site name, the name and address of the Respondents, and the EPA docket number for this action, and shall be sent to:

Regional Hearing Clerk (6C)  
U.S. Environmental Protection Agency  
Region 6  
P.O. Box 360582M  
Pittsburgh, Pennsylvania 15251

Respondents shall simultaneously send a copy of each check to those EPA representatives designated in Section XVI.

#### **IX. CIVIL AND STIPULATED PENALTIES**

31. For each failure by a Respondent to meet any requirement in this Consent Order, such Respondent shall pay stipulated penalties in the amount set forth below for each day, or part thereof, during which the violation continues:

<u>Period of Failure to Comply</u>	<u>Penalty Per Violation Per Day</u>
1st through 7th day	\$ 5,000
8th through 14th day	\$10,000
15th through 21st day	\$15,000
22nd through 28th day	\$20,000
29th day and beyond	\$25,000

32. In addition to the penalties listed in paragraph 31 and any other remedies or sanctions available to EPA, a civil penalty of up to \$25,000 per day may be assessed against a Respondent for each failure or refusal by such Respondent to comply with any term or condition of this Consent Order pursuant to Section 122(1) of CERCLA, 42 U.S.C. 9622(1).

33. Stipulated and civil penalties shall be paid by certified or cashier's check within 30 days of receipt of a demand letter for payment or within 30 days of final dispute resolution, whichever comes later.

34. Docket No. CERCLA 6-08-92 should be clearly typed on the check to ensure proper credit.

35. Each check for stipulated or civil penalties shall be made payable to the Hazardous Substance Superfund and sent to:

Regional Hearing Clerk (6C)  
U.S. Environmental Protection Agency  
Region 6  
P.O. Box 360582M  
Pittsburgh, Pennsylvania 15251

Respondents shall simultaneously send a copy of the check and a transmittal letter which includes a brief description of the violation to those representatives of EPA designated in Section XVI.

#### X. DISPUTE RESOLUTION

36. The parties shall use their best efforts to resolve all disputes or differences of opinion informally. If, however, the parties are unable to resolve such matters informally, then the position advanced by EPA shall be considered binding unless the Respondents invoke the dispute resolution provisions of this Section.

37. If Respondents disagree with EPA's assessment of stipulated penalties pursuant to Section IX of this Consent Order, respondents shall notify EPA in writing of their objections and the basis therefore within 7 calendar days of receipt of EPA's demand for payment. Said notice shall set forth the specific points of the dispute and state the basis for the Respondents' position. Within 10 days of EPA's receipt of such written notice, EPA shall provide to Respondents its decision on the pending dispute.

38. EPA's decision pursuant to paragraph 37 shall be binding upon all parties to this Consent Order, unless Respondents, within 7 days, notify EPA in writing of their continued objections and request the Hazardous Waste Management Division Director for Region 6 to convene an informal conference for the purpose of discussing

Respondents' objections and the reasons for EPA's determination. The Hazardous Waste Management Division Director shall issue a written decision within 10 days from the date of the informal conference.

39. Except as set forth below, in any dispute, Respondents shall have the burden of showing that EPA's position, including without limitation any interpretation of the terms and conditions of this Consent Order and of applicable federal and state law and regulations, was arbitrary and capricious or otherwise not in accordance with law.

40. The existence of a dispute as defined herein, and EPA's consideration of such matters as placed into dispute shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to this Consent Order. During the pendency of the dispute resolution process, stipulated penalties with respect to the disputed issue shall accrue, but payment of stipulated penalties shall be stayed pending resolution of the dispute. Stipulated penalties shall be calculated for each day of non-compliance with this Consent Order beginning with the first day of non-compliance and including the period during which the Dispute Resolution procedures were on-going. If, however, the dispute is ultimately resolved in Respondents' favor, no stipulated penalties shall be due.

41. Notwithstanding any other provisions of the Consent Order, no action or decision by EPA, including without limitation, decisions of the Regional Administrator of Region 6 (or his designee), pursuant to this Consent Order shall constitute final agency action giving rise to any rights to judicial review prior to EPA's initiation of judicial action to compel Respondents' compliance with the mandates of this Consent Order.

42. Unless otherwise specifically set forth herein, the failure to provide expressly for dispute resolution in any section of this Consent Order is not intended and shall not bar Respondents from invoking this Section as to any dispute arising under this Consent Order. However, no dispute resolution decisions issued pursuant to this Section shall be subject to this dispute resolution section.

#### **XI. CERTIFICATION OF RESPONDENTS**

43. The Respondents certify that to the best of their knowledge and belief they have provided to the United States all information currently in their possession and in the possession of their agents, officers, directors, employees, or contractors which relates in any way to the ownership, operation, generation, treatment, transportation, or disposal of hazardous substances at or in connection with the site.

**XII. COVENANT NOT TO SUE**

44. Subject to the reservation of rights in Section XIII of this Consent Order, upon payment of the amounts specified in Paragraph 29, Section VIII, of this Consent Order, EPA covenants not to sue or take any other civil or administrative action against the Respondents for any and all civil liability pursuant to sections 106 or 107(a) of CERCLA, 42 U.S.C. 9606 or 9607(a), or Section 7003 of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. 6973, with regard to the Site.

45. In consideration of EPA's covenant not to sue in Paragraph 44, Section XII, of this Consent Order, the Respondents agree not to assert any claims or causes of action against the United States or its contractors or its employees or the Hazardous Substance Superfund arising out of expenses incurred or payments made pursuant to this Consent Order, or to seek any other costs, damages, or attorney's fees from the United States or its contractors or employees arising out of response activities at the Site.

**XIII. RESERVATION OF RIGHTS**

46. Nothing in this Consent Order is intended to be nor shall it be construed as a release or covenant not to sue any Respondent(s) for any claim or cause of action, administrative or judicial, at law or in equity, which the United States, including EPA, may have against any such Respondent(s) for:

(a) Any liability as a result of failure to comply with this Consent Order;

(b) Any liability as a result of failure to make the payments required by Paragraph 29, section VIII, of this Consent Order;

(c) Any liability as a result of any future failure to exercise due care with respect to hazardous substances at the Site;

(d) Any liability resulting from any future exacerbation by Respondents of the release or threat of release of hazardous substances from the Site;

(e) Any and all criminal liability; or

(f) Any matters not expressly included in the covenant not to sue set forth in this Consent Order.

47. Nothing in this Consent Order constitutes a covenant not to sue or to take action or otherwise limits the ability of the United States, including EPA, to seek or obtain further relief from the Respondents, and the covenant not to sue in Paragraph 44, Section XII, of this Consent Order may be modified or declared to

be null and void at the discretion of EPA, if information materially different from that specified in Section III is discovered which indicates that Respondents fail to meet any of the criteria specified in section 122(g)(1)(A) of CERCLA.

48. Except as otherwise expressly provided in Paragraph 44, Section XII, of this Consent Order, nothing in this Consent Order is intended as a release or covenant not to sue for any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the United States, including EPA, may have against any person, firm, corporation or other entity not a signatory to this Consent Order.

49. EPA and Respondents agree that the actions undertaken by the Respondents in accordance with this Consent Order do not constitute an admission of any liability by the Respondents. The Respondents do not admit and retain the right to controvert in any subsequent proceedings, other than proceedings to implement or enforce this Consent Order, the validity of the Statement of Facts or Determinations contained in this Consent Order.

#### XIV. CONTRIBUTION PROTECTION

50. Subject to the reservation of rights in Section XIII, of this Consent Order, EPA agrees that by entering into and upon carrying out the terms of this Consent Order, Respondents will have resolved their liability to the United States for those matters set forth in the covenant not to sue, Paragraph 44, Section XII, as provided by section 122(g)(1) of CERCLA, 42 U.S.C. 9622(g)(5), and shall have satisfied their liability for those matters within the meaning of section 107(a) of CERCLA, 42 U.S.C. 9607(a) and are entitled to contribution protection under CERCLA Section 113(f)(2), 42 U.S.C. 9613(f)(2).

#### XV. PARTIES BOUND

51. This Consent Order shall apply to and be binding upon and inures to the benefit of the Respondents and their officers, directors, shareholders, employees, agents, affiliates, successors (including, but not limited to successors-in-title), heirs, and assigns. The signatories represent that they are fully authorized to enter into the terms and conditions of this Consent Order and to legally bind the Respondents. Notwithstanding the foregoing, Merchants Fast does not currently own or operate any portion of the Site, and, as a result, Merchants Fast has no current duties or obligations under Paragraphs 25, 26, 27, 28, 52, and 53 of this Consent Order, and Merchants Fast shall have no liability based solely on the failure of any other Respondent to fulfill its duties and obligations under such Paragraphs.

52. In the event that Respondents transfer title or possession of the Site, they shall notify the EPA at least 30 days

prior to any such transfer and shall continue to be bound by all of the terms and conditions of this Consent Order unless EPA agrees otherwise and modifies this Consent Order accordingly.

53. In the event that Respondents transfer title or possession of the Site, they shall provide any such transferee with a copy of this Consent Order together with a written notice stating that such transferee (a) is subject to all of the requirements of the Consent Order including, without limitation, the requirement to provide EPA continuing access to the property for the purposes of monitoring its environmental status, taking remedial action, implementing or enforcing the terms of this Consent Order, or otherwise discharging EPA's regulatory responsibilities, and (b) is required to exercise continuing due care, as described in Section VII, in avoiding future releases from the Site. In addition, in no event shall the conveyance of any interest in property that includes, or is a portion of, the Site release or otherwise affect the liability of the Respondents to comply with this Consent Order.

#### **XVI. FORM OF NOTICE**

54. All notices required to be given pursuant to this Consent Order shall be in writing, unless otherwise expressly authorized. Notices or submissions required by this Consent Order shall be deemed timely if deposited with the United States Postal Service or an equivalent delivery service on or before the due date. Response times under this Consent Order shall run from the date of receipt, unless otherwise specified. Documents, notices, and other correspondence to be submitted pursuant to this Consent Order shall be sent by certified mail, return receipt requested, express mail service, or some equivalent delivery service providing proof of delivery to the following addresses or to such other addresses as the Parties hereafter may designate in writing:

##### **As to the Environmental Protection Agency**

Mark Fite  
Remedial Project Manager (6H-SC)  
U.S. Environmental Protection Agency  
1445 Ross Ave.  
Dallas, Texas 75202-2733  
Fax: (214) 655-6460

Marvin Benton  
Assistant Regional Counsel (6C-WF)  
U.S. Environmental Protection Agency  
1445 Ross Ave.  
Dallas, Texas 75202-2733  
Fax: (214) 655-2182

As to Respondents

Calvin Reeves  
Vice President and General Counsel  
Baptist Foundation of Texas  
2001 Bryan, Suite 1500  
Dallas, Texas 75201-3082  
Fax: (214) 978-3395

Gary Armstrong  
President  
Merchants Fast Motor Lines, Inc.  
1733 East Highway 80  
Abilene, Texas 79601  
Fax: (915) 674-4608

Rex King  
Palletized Trucking, Inc.  
2001 Collingsworth  
Houston, Texas 77249  
Fax: (713) 225-0110

Robert Sternenberg  
President  
Trucking Properties, Inc.  
2929 Allen Parkway, Suite 2100  
Houston, Texas 77019  
Fax: (713) 520-1041

As to the State

Louis Rogers  
South Cavalcade Superfund Site Coordinator  
Superfund and Emergency Response Section  
Texas Water Commission  
1700 North Congress  
Austin, Texas 78711-3087  
Fax: (512) 463-8408

**XVII. PUBLIC COMMENT**

55. This Consent Order shall be subject to a thirty-day public comment period pursuant to Section 122(i) of CERCLA, 42 U.S.C. 9622(i). In accordance with Section 122(i)(3) of CERCLA, 42 U.S.C. 9622(i)(3), EPA may withdraw or modify consent to this Consent Order if comments received disclose facts or considerations which indicate that this Consent Order is inappropriate, improper, or inadequate.

**XVIII. ATTORNEY GENERAL APPROVAL**

56. The Attorney General or his designee has issued prior written approval of the settlement embodied in this Consent Order in accordance with Section 122(g)(4) of CERCLA.

**XIX. EFFECTIVE DATE**

57. The effective date of this Consent Order shall be the date upon which EPA issues written notice to the Respondents that the public comment period pursuant to Paragraph 55, Section XVII, of this Consent Order has closed and that comments received, if any, do not require modification of or EPA withdrawal from this Consent Order.

ADMINISTRATIVE ORDER ON CONSENT  
SOUTH CAVALCADE STREET SUPERFUND SITE  
DOCKET NO. CERCLA 6-08-92

IT IS SO AGREED AND ORDERED:

REX KING and MARILYN LEE KING  
(for themselves and for  
PALLETIZED BRUICKING, INC.)

By: Rex King  
Mr. Rex King  
Owner

Date: 1/14/92

By: Marilyn Lee King  
Mrs. Marilyn Lee King  
Owner

Date: 1-15-92  
14 RK

BAPTIST FOUNDATION OF TEXAS

By: Calvin Reeves  
Mr. Calvin Reeves  
Vice President and  
General Counsel

Date: 1-21-92  
30 CR

MERCHANTS FAST MOTOR LINES, INC.

By: Fred Armstrong  
Mr. Fred Armstrong  
President

Date: 1-23-92

TRUCKING PROPERTIES, INC.

By: Robert Sternberg  
Mr. Robert Sternberg  
President

Date: 1/13/92

U.S. ENVIRONMENTAL PROTECTION AGENCY

By: M. J. Wynne  
M. J. Wynne  
Regional Administrator  
Region 6

Date: 1-24-92

**APPENDIX D**  
**RESPONSIVENESS SUMMARY**

012947

## Responsiveness Summary South Cavalcade Street Superfund Site ROD Amendment No. 1

This Responsiveness Summary has been prepared to provide written responses to comments submitted regarding the Proposed Plan of Action for the South Cavalcade Superfund Site in Houston, Texas.

EPA received public comment for the South Cavalcade Site Proposed Plan during a 30 day comment period from February 9 through March 12, 1997. During that period, EPA received comments from each land owner and Beazer East. Each land owner and Beazer East supported the proposed amendment in writing. The landowners' comments are included with this amendment as Appendix E and do not require a response. Beazer East's comments and EPA's response are provided below. In addition, on February 20, 1997, EPA held a meeting at which the public was allowed to comment on this proposed plan. A public notice announcing the public comment period and public meeting was printed in the Houston Chronicle on February 9, 1997. No comments opposing the plan were received from the general public during the comment period.

### Beazer East Inc. Comments

#### 1. General Comments

##### a. Soil Washing

**Comment:** The 1993 Soil Washing Pilot Study conclusively demonstrated that soil washing would not successfully reduce constituent concentrations to meet the remedial goals in forty percent (40%) of the impacted soil. Consequently, the Pilot Study indicated that soil washing would be neither protective of human health nor cost-effective. Beazer recommends that the Proposed ROD Amendment be revised to more clearly reflect this point. Specific suggestions are set forth in the Specific Comments section below.

**EPA Response:** EPA considered the comment and agrees that the soil washing pilot test failed to conclude that soil washing could successfully remediate contaminated soils on site and made changes to paragraph 1.e, and 4.a. to "more clearly reflect this point." However, since soil washing cost effectiveness was not the principal criteria for deciding to amend the ROD, EPA does not believe a revision is necessary to "more clearly reflect" the reasons for this amendment. EPA believes it adequately addressed the impact cost-effectiveness had on the decision to amend the remedy in Section 5(g) of the ROD Amendment.

b. Applicable and Relevant and Appropriate Standards ("ARARs")

Comment: The proposed revised remedial alternative is a cap consisting of at least 6 inches of steel reinforced concrete. Beazer concurs with EPA's conclusion that there are no federal or state requirements which are applicable to the proposed cap. However, the draft Proposed Amended ROD states that certain requirements contained in 40 CFR Part 264, Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities, are "relevant and appropriate." The Proposed Amended ROD states that "relevant and appropriate" standards are those which address situations or problems sufficiently similar to those encountered at the site that their use is warranted. Beazer does not believe that the hazardous waste regulations listed as "relevant and appropriate" address situations or problems sufficiently similar to those at this site, given the proposed revised remedy, such that their use is warranted. Basically, although a concrete cap has been proposed for the amended remedy, the remedy is not analogous to those employed to accomplish closure of hazardous waste landfills.

Each of the regulations cited relates to the closure, post-closure and/or post-closure maintenance of a hazardous waste disposal facility. Generally speaking, these regulations assume that the media surrounding the disposal facility has not been impacted and include measures to prevent and monitor the potential for such an impact. In addition, these regulations include technical construction standards which have not been proposed or evaluated for this site. For example, one of the requirements of 40 CFR §264.310(b), which is one of the sections referenced as "relevant and appropriate," is that the owner/operator continue to operate the leachate collection and removal system until leachate is no longer collected. Clearly, such a requirement is not "relevant and appropriate" with respect to the Proposed Amended ROD. Moreover, reference to the cited sections of the RCRA standards on closure of hazardous waste landfills as "relevant and appropriate," is not only incorrect, it may prove confusing to other parties in terms of the requirements to be contained in the Amended ROD.

In sum, Beazer believes that the listed sections of 40 CFR Part 264 are not relevant and appropriate standards to the proposed amended soils remedy of this site. Therefore, Beazer requests that the Proposed Amended ROD be revised by deletion of the reference to these regulations as "relevant and appropriate", and that a sentence be included that EPA has concluded that there are no federal or state standards that are "relevant and appropriate" to the proposed amended soils remedy.

EPA Response: EPA considered the comment and agreed that the relevant and appropriate standards proposed required clarification. However, EPA believes specific landfill requirements are relevant and appropriate because landfilling and capping the contaminated Superfund soils in place (the remedy described in this Amended ROD) are sufficiently similar. They are similar because in either case untreated contamination essentially remains below the surface. EPA must clearly assure the public it is adequately mitigating exposures to this contamination and it believes there are existing RCRA ARAR's that can provide such assurance. Having established there is just cause to list some ARAR's, EPA agrees that it should list only very specific ARAR's which describe specific performance as well as closure and post closure and care requirements. Consequently, to clarify which requirements are relevant and appropriate, EPA removed ARAR

citations that referenced RCRA requirements which were beyond the scope of this remedial action. However, there were specific requirements in those removed ARAR's which are relevant and appropriate. Those requirements are groundwater monitoring as well as closure and post closure care actions. Therefore, in lieu of citing specific ARAR's EPA added specific groundwater monitoring and post closure requirements to the "Description of the New Alternative" text found in the Amended ROD.

c. Consistency with the 1988 ROD

Comment: In the 1988 ROD, EPA concluded that those affected soils on the site that were covered by existing concrete did not pose an unacceptable risk to human health and the environment. Thus, the selection of steel reinforced concrete to cap the currently uncapped areas of the site where affected soils contain constituents of concern at levels in excess of the remedial goals, is consistent with the approach of the 1988 ROD. Beazer believes that it may be appropriate to highlight this point further in the Proposed Amended ROD.

EPA Response: EPA agrees the current ROD does not require excavating soil beneath existing structures and pavements at this time. However, the ROD states that if monitoring shows contaminants are leaching from beneath existing structures EPA may require additional remedial action (see ROD p. 32). Therefore EPA has not concluded that soils on the site covered by existing concrete will never threaten human health or the environment. Therefore in response to this comment EPA did not believe any changes to the proposed plan were required.

d. Remedial Approach

Comment: Beazer would like to clarify that the affected soil on site is not a hazardous waste unless it is actively managed. Moreover, much of the soil would not qualify as a listed hazardous waste and does not exhibit a characteristic of a hazardous waste and, thus, would not be a hazardous waste, even if actively managed. Therefore, Beazer believes that it is more appropriate to refer to a "remedial approach" rather than a "hazardous waste management approach" in the Proposed Amended ROD.

EPA Response: In response to actively managing affected soil, a waste is not defined by how it is "actively managed." In any event EPA agrees it is appropriate to modify references to "hazardous waste management approaches" to remedial approach.

2. Specific Comments

a. Page 3, paragraph 1.d.

Comment: Beazer believes that, for purposes of the Proposed Amended ROD, it is more accurate to state:

In lieu of using the soil washing and soil flushing remedies originally selected in the 1988 ROD, EPA proposes that the areas where surface contamination exceeds the 1988 ROD established soil cleanup goals - 700 ppm total carcinogenic polynuclear aromatic hydrocarbons (cPAH)<sup>2</sup> - be sealed with a reinforced concrete cover

EPA Response: EPA agreed with Beazer's comment and made the suggested change.

- b. Page 4, paragraph 1.d, second subparagraph.

Comment: Beazer recommends that this subparagraph be revised to state "Since capping contamination changes the remedial approach originally established in the ROD..."

EPA Response: EPA agreed with Beazer's comment and made the suggested change.

- c. Page 4, paragraph 1.e, second subparagraph

Comment: Beazer recommends that this subparagraph be revised to state:

In 1993, during the remedial design phase BEI conducted a soil washing pilot study. The study's results conclusively demonstrated that forty percent (40%) of the soil volume could not be washed to meet the remedial goals contained in the ROD. Consequently, soil washing: (1) could not provide the level of protection required by the ROD; (2) failed to demonstrate short or long term effectiveness; (3) would not reduce toxicity, mobility or volume of COC's for forty percent of the volume; (4) is not implementable; and (5) is not cost-effective. Thereafter, BEI repeated its belief that any contamination beneath the surface does not pose a realistic health risk. Beazer requested that EPA reconsider the risk calculations, revising them to take into account reasonably foreseeable exposure pathways given the current and anticipated industrial site use.

EPA Response: EPA reviewed Beazer's comment and, although it did not use the suggested revision, it agreed to rewrite the paragraph to clarify the point that the test did not provide sufficient information to conclude full scale soil washing operations would provide any benefit.

- d. Page 5, paragraph 2.b., lines 6-9.

Comment: Beazer recommends revising these lines to state:

design effort BEI conducted a soil washing pilot study; however, the study conclusively demonstrated that forty (40%) percent of the soil volume could not be washed to meet the remedial goal.

**EPA Response:** See response to comment 2(c), referencing Page 4, paragraph 1.e, second subparagraph.

- e. Page 5, paragraph 2.b., Line 21.

**Comment:** Insert a new sentence and revise the last sentence:

When preparing the 1988 ROD, EPA determined that existing concrete and structures provided sufficient protection against reasonably foreseeable exposure to soils affected by COCs at levels in excess of remedial goals. Similarly, based upon the revised EPA principal threat guidance, EPA believes BET's proposed concrete cover over previously uncapped areas affected by the same COCs at similar levels will provide reliable and sufficient containment and protection against reasonably foreseeable exposure pathways, and provide greater overall protection to human health and the environment than the 1988 ROD remedy

**EPA Response:** See response to comment 2(c), Consistency with the 1988 ROD, above.

- f. Page 6, Exposure Pathway, Table 1.

**Comment:** We could not locate a reference to Table 1 in the text. In addition, we found Table 1 potentially to be confusing because it appears to include exposure pathways which are no longer viewed by EPA as "realistic". Therefore, Beazer recommends that Table 1 be deleted. Alternatively, if it is not deleted, it should be labeled as "Four Exposure Pathway Assumptions Considered in Original RI/FS" and a corresponding textual reference thereto should be inserted.

**EPA Response:** EPA included the reference to Table 1 in the second full paragraph of section 2(b), "Reasons for Amending the ROD." The purpose of Table 1 was to provide the potential pathways designated in the ROD.

- g. Page 6, second paragraph, last sentence.

**Comment:** Beazer recommends that the last sentence be revised to state: "Therefore, this pathway does not present an unacceptable risk to human health and the environment."

**EPA Response:** EPA agreed with the suggested revision and included the revision in the amendment.

- h. Page 6, third paragraph.

**Comment:** Since this is the first reference to "brownfield" you may wish to move the footnote from page 9 to this page.

**EPA Response:** EPA agreed with Beazer's suggestion and moved the footnote to the first reference to brownfields.

Page 6, fifth paragraph

**Comment:** Beazer recommends that the last sentence be revised to state, "Furthermore, the deed restrictions imposed as a result of the administrative orders on consent with the property owners provide institutional controls to inhibit residential land use."

**EPA Response:** EPA considered the comment but decided not to modify the proposed plan since the Administrative Order on Consent states residential land use is "inappropriate."

i. Page 7, first paragraph

**Comment:**

Beazer recommends that the first sentence be revised to state, "To summarize the reasons for amending the 1988 ROD, the soil washing pilot study conclusively demonstrated that soil washing was not cost-effective and would not achieve the remediation goals set forth in the 1988 ROD."

Beazer recommends that the last sentence be revised to state "EPA evaluated the land use and concluded that, given the current and most reasonably anticipated future land use, the concrete cap adequately would protect human health and the environment by severing exposure pathways, just as the pre-existing concrete and structures were deemed to do in the 1988 ROD."

**EPA Response:** See EPA Response to comment on 2(c), referencing Page 4, paragraph 1.e, second subparagraph above.

j. Page 7, paragraph 3

Comment: As Beazer has previously discussed, it does not believe that the RCRA regulations listed in Table 3 are "relevant and appropriate" with respect to the proposed concrete cap. Therefore, Beazer requests that the last sentence be revised to state "EPA does not believe that there are any ARARs with respect to the proposed amended capping remedy." In addition, Table 3 should be deleted.

EPA Response: See EPA Response to comment "Applicable and Relevant and Appropriate Standards ("ARARs")"

k. Page 8, paragraph 4.a

Comment: Beazer believes that the list of potential exposure pathways may be confusing to the reader since the previous discussions indicated that: (1) the administrative order requirements imposed upon the property owners has eliminated the first category; (2) the second pathway category was determined not to pose an unacceptable risk; and (3) EPA has concluded that residential use is not a reasonably foreseeable future use of the property. Therefore, the only exposure pathway which remains is "inadvertent ingestion and direct contact with surface soils by on-site commercial occupants." Thus, it would be clearer to eliminate the first three exposure pathways included in the list or eliminate the list entirely.

EPA Response: EPA considered the comment and agreed that the proposal could be clarified. The proposal was clarified by referring to only the most probable pathway identified in the "Summary of Rational for Changing the Remedy Selected In the ROD." See paragraph 5.a. in the Amended ROD.

Comment: In addition, Beazer believes that it would be helpful to amend the sentence following the list of exposure pathways to state "Consequently, as long as the land use remains similar to the present use, which is the only reasonably foreseeable use of the property for the many reasons discussed above, and the concrete cap...."

EPA Response: EPA considered the comment but did not believe changing the proposed plan was warranted.

l. Page 8, paragraph 4.b

Comment: As discussed above, Beazer does not believe that the regulations listed on page 7 are ARARs. Thus, Beazer requests that this paragraph be revised to state:

The previous remedy, soil washing, will not meet the ARAR's. While there are no ARAR's with respect to the soils remedy set forth in the Proposed Amended ROD, the concrete cap will be designed so as to minimize the need for further maintenance.

**EPA Response:** See EPA Response to comment 1(b), "Applicable and Relevant and Appropriate Standards ("ARARs")."

m. Page 9, paragraph 4.d

**Comment:** Beazer recommends that this section be revised to include an explanation that the pilot study did not conclusively demonstrate that the soil washing remedy would not adequately reduce toxicity, mobility or volume for forty percent (40%) of the affected soil.

**EPA Response:** EPA considered the response but concluded revising the proposed plan was not necessary.

n. Page 9, paragraph 4.g, second subparagraph

**Comment:** Beazer requests that the first, second and third sentences be revised to state:

As demonstrated by the soil washing pilot project, forty (40%) percent of the affected soils could not be remediated to the remedial goals through use of the soil washing remedy selected in the 1988 ROD. This would increase the financial risk for bidders because the final volume of soil which could be treated and the volume which would have to be disposed is uncertain. Such uncertainty will increase the bid cost of the soil washing remedy. Elimination of the uncertainty improves cost control.

**EPA Response:** EPA considered the response but concluded revising the proposed plan was not necessary.

## **APPENDIX E - LAND OWNER COMMENTS**

# **Duplicate Page(s) Removed**

## **APPENDIX E - LAND OWNER COMMENTS**

Page 012957 was a duplicate of 012956

**TRUCKING PROPERTIES, INC.**

March 11, 1997

Ms. Olivia Rodriguez Balandrán  
Community Relations Coordinator  
U.S. Environmental Protection Agency, Region 6  
1445 Ross Avenue (6SF-P)  
Dallas, Texas 75202-2733

RE: Proposed ROD Amendment  
South Cavalcade CERCLA Site  
Houston, Texas

Dear Ms. Balandrán:

Trucking Properties, Inc. is writing with regard to the United States Environmental Protection Agency's proposed Record of Decision (ROD) Amendment to allow concrete capping as the soil remedy for the South Cavalcade Superfund site.

Trucking Properties currently owns a significant parcel of this site and, as you are aware, we signed a Consent Order with the USEPA in 1992. For the past several years we have been attempting to sell this property for continued trucking operations. Over the past two years these efforts have been hampered by the readily apparent incomplete remedial action construction activities at the front of our property. Therefore, we are excited to see the USEPA moving forward with allowing Beazer to place a concrete cap as the final impacted soil remedy.

USEPA's approval of the proposed ROD Amendment will certainly aid our property disposition efforts, and the sale of this property to a new trucking entity will provide the best opportunity for it to be utilized to its maximum business potential. This facility which previously employed over 50 employees has not been operated since 1991. Expedient completion of the concrete cap remedy will allow an operator of this facility to place it back in service and replace three empty shell jobs. Based on the configuration proposed in Beazer's January, 1996 Conceptual Design, the new concrete cap will provide us with a new employee parking area. This improvement will also assist in our attempts to sell this property.

We look forward to the USEPA's final approval of the ROD Amendment so that Beazer can complete the soil remedy for the site, which will allow us to more easily proceed with the disposition of our property.

Sincerely,

  
Richard J. Reese  
Vice President

RJR  
cc: Michael Stenaka, Beazer

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Reply to:

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March 3, 1997

Ms. Olivia Rodriguez Balandrán  
Community Relations Coordinator  
U.S. Environmental Protection Agency, Region 6  
1445 Ross Avenue (6SF-P)  
Dallas, Texas 75202-2733


Re: Proposed ROD Amendment  
South Cavalcade CERCLA Site  
Houston, Texas

Dear Ms. Balandrán:

NW NationsWay Transport Service, Inc. is writing in support of the United States Environmental Protection Agency's proposed Record of Decision (ROD) Amendment to allow concrete capping as the soil remedy for the South Cavalcade Superfund site.

NationsWay recently purchased the northern portion of this site. Since that purchase we have been exploring several facility expansion alternatives. Several of these expansion alternatives would include additional tarmac areas overlying the impacted soil area on our property. The removal of this soil from our property as proposed in Beazer's January, 1996 Conceptual Design would provide the clearest path for any of our potential facility expansion projects and allow us to completely utilize the property's trucking terminal potential. It is our understanding that the USEPA's approval of the proposed ROD Amendment will allow this soil removal to happen in a timely manner; therefore we support the proposed ROD Amendment.

Sincerely,

  
Mr. Brian Wilcox  
Branch Manager

cc: Michael Sienka, Beazer

**NATIONSWAY TRANSPORT SERVICE, INC.**

Corporate Office: 5801 Holly Street • P.O. Box 5001 • Commerce City, CO • 80037-5001 • (303) 288-3611 • FAX (303) 288-4649

REX KING, PRESIDENT

PHONE: (713) 225-330

**PALLETIZED TRUCKING INC.**

2001 COLLINGSWORTH STREET  
P. O. BOX 8744  
HOUSTON, TEXAS 77249

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March 7, 1997

Ms. Olivia Rodriguez Balandran  
Community Relations Coordinator  
U.S. Environmental Protection Agency, Region 6  
1445 Ross Avenue (6SF-P)  
Dallas, Texas 75202-2733

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**RE: Proposed ROD Amendment  
South Cavalcade CERCLA Site  
Houston Tx**

Dear Ms. Balandran:

Palletized Trucking, Inc. is writing to provide the United States Environmental Protection Agency with comments on the proposed Record of Decision (ROD) Amendment which would allow the use of concrete capping as a soil remedy at the South Cavalcade Superfund site.

As you are aware, we are a property-owner at this site, and have even signed a Consent Order with the USEPA regarding this site. We are very pleased to see the USEPA finally move forward with allowing Beazer to place a concrete cap as the final remedy for impacted soils at this site. It has been nearly two years since Beazer started full scale remediation activities, which required us to vacate a significant portion of our trailer parking area. Vacating that area for such a long period of time has hindered our operational efficiency and costs us a significant sum of money. The delay has also prevented us from proceeding with our tire shop improvement project, which would be located in an area of the proposed concrete cap.

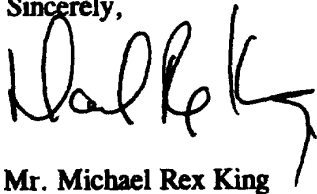
By approving the proposed ROD Amendment and allowing Beazer to proceed with the concrete cap installation, the USEPA will be taking a positive step toward returning this property to its full business potential. Additionally, the new concrete cap will provide us with an improved working surface versus the crushed concrete surface formerly used along the eastern side of our property. We have agreed with Beazer to accept responsibility for the maintenance of this new concrete surface, which is consistent with our own Consent Order requirements to properly maintain the existing concrete areas on our property.

Page 2  
March 7, 1997

012961

We look forward to the USEPA's approval of the ROD Amendment so that design and construction of the concrete cap can proceed as rapidly as possible.

Sincerely,



Mr. Michael Rex King  
Vice President - Sales and Service

cc: Michael Slenska, Beazer

mk/ch